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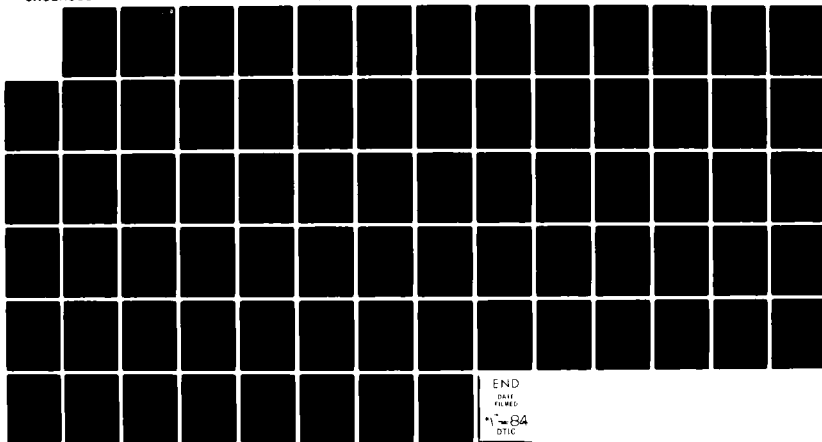
THE SOUTH KOREAN MODEL OF POLITICAL AND ECONOMIC  
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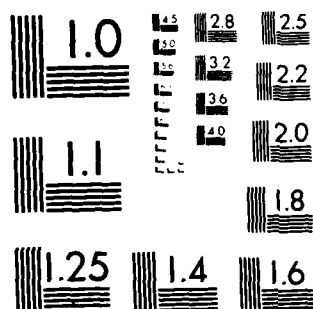
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THE SOUTH KOREAN MODEL OF POLITICAL AND ECONOMIC DEVELOPMENT: ECONOMIC ASPECTS

P. W. Kuznets

DEC 23 1983

I. Introduction

South Korea's high rate of economic development since the pace of development accelerated in the mid-1960s has aroused interest in how South Korea was able to achieve such rapid development. It is unlikely, however, that the Korean experience provides a model which can be easily applied elsewhere. Much of what has happened is a result of policy actions that released large amounts of previously underutilized productive capacity, and this was possible only because the government was able to implement its policy decisions effectively. Effective implementation, in turn, has followed from a combination of political, social, cultural, and other factors that is not duplicated in other countries. In this sense, Korea's development experience is sui generis. Many other countries face similar economic problems, however, in a world of oil shocks and worldwide recession. Also, economic response among countries to the same events or policy actions is likely to be similar if not identical. In this sense, the economic mechanism is a universal mechanism and Korea's experience can serve as a model for other countries. The Korean model, in short, may apply better to strictly economic aspects of the development process than to political, cultural, and other more institution-bound aspects of development.<sup>1</sup>

This paper includes four parts in addition to the introduction, each of which deals with one aspect of Korea's economic development. The introduction, beside examining Korea as a model, listing what is to follow, and

\* Draft final report prepared under contract number 1724-320102 for the U.S. Department of State, November 1983.

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explaining topic choice, is devoted mainly to brief presentations of the main issues and findings that are analysed in more detail in the subsequent parts of the paper. It is intended to provide readers with an overview of what follows. What follows is limited to four topics: Agriculture as a Lagging Sector (Part II); Labor Absorption (Part III); The Government and the Economy (Part IV); and Exports and Development Strategy (Part V). These four were chosen because each has had a major impact on contemporary development and should continue to have a major impact in the future. They were also chosen because they have extra-economic as well as economic significance, and should therefore relate to the work of the other scholars who are analysing the political and social aspects of the South Korean model in companion papers.

Agriculture, labor absorption, the government's role, exports and development strategy are interrelated topics. The government's "two-price" system of agricultural price supports, for example, has probably slowed the outflow of labor from agriculture and has undoubtedly reduced the competitiveness of Korea's labor-intensive exports. Interrelations are not always made explicit, however, in order to reduce overlap and focus attention on the issue at hand. These issues are sufficiently universal to have inspired a general literature and a Korean-case literature. Again, to preserve focus, references to the literature have been confined to footnotes, as have the technical problems that cropped up in the analysis. Non-specialist readers should therefore be able to follow the text with no more than the usual difficulties imposed by economists' jargon, while specialists may find the footnotes of particular interest.

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Falling employment and slower output growth than in the industrial and service sectors make agriculture a lagging sector in Korea. Though agricultural performance has been good by international standards, it has been insufficient to keep up with demand as large increases in income have overwhelmed the low income = elasticity of demand for food. Korea has one of the world's highest man/land ratios so that the fundamental bottleneck is land shortage. Other, non-land inputs are unlikely to increase much in the near term. The outlook, therefore, is for continued slow output growth and a widening of the gap between domestic output and consumption. The imports needed to fill this gap, mainly food grains, have fluctuated widely from one year to the next, but the trend has been upward and the recent import bill for foods has been around \$ 2 billion a year, or 7-8 percent of total commodity imports at a time when the share of oil has been 28 percent.

When United States PL 480 food-grain imports were to be phased out, the government switched in the late 1960s from policies that taxed agriculture to support industry to a "two-price" system of low consumer and high farm prices. This was done to hold down wage costs, encourage domestic production, and raise lagging farm incomes. The two-price system has created deficits which, because they have been financed by overdrafts with the central bank, proved inflationary. Further, the import restriction needed to support farm prices has kept consumer-level prices well above world market prices or levels in export competitors like Taiwan. Despite price supports, the gap between farm and non-farm incomes has widened after 1979, and should widen further since support levels are now being reduced. Economic benefits, in short, seem outweighed by the supports' undesirable side effects. Political benefits also seem insufficient to

offset the economic costs because the regime does not have to court the farm vote



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as, for instance, the LDP has to in Japan. Uncertainty associated with obtaining food imports is a more likely, strategic reason for encouraging high-cost domestic production, but the economic costs of reducing uncertainty have been high.

The New Community Movement (saemaul undong) to improve rural life and to raise farm incomes and productivity has been fairly successful, unlike the price-support program. Though it is probably less responsible for raising farm incomes and productivity than more direct measures, such as improved extension services and increased provision of credit, the Movement has contributed to rural development by mobilizing the rural populace for self-help efforts. It demonstrates what heavy emphasis and a strong bureaucracy can do, and may have helped to slow Korea's heavy rural out-migration since it was inaugurated in late 1971. A shift from food grain to fruit and vegetable production, aided by the increasing use of plastic-covered frames, has also contributed to agricultural incomes and productivity. Current government policies, which emphasize productivity increase rather than price supports as a means of raising farm incomes, center on mechanization to offset labor shortages during seasons of peak activity. The long-run solution to problems of low farm income and productivity probably rests, as elsewhere, on increasing off-farm earnings opportunities. This is unlikely to occur before industrial activity, now highly concentrated in a few urban areas, is more widely dispersed among provincial cities.

Employment almost doubled during the past two decades of accelerated growth, yet unemployment and underemployment are still of such concern that current growth targets were chosen so as to reduce unemployment to the four percent level. One reason for concern has been the slowdown in the pace of growth after the reversal of 1980. Another is the post-Korean War baby boom, which will raise the number of new labor-force entrants each year through the mid-1980s. The long-term problem, however, has been the change in economic

structure as the economy has developed. A highly labor-intensive agriculture has declined in relative importance while the share of industrial activities whose labor intensity is below average has risen. Labor absorption has also been reduced by productivity growth within sectors. Employment has increased since the mid-1960s only because rapid output expansion has more than offset the absorption-reducing effects of sectoral change and productivity growth.

Labor absorption is of concern not only because of unemployment which, for institutional reasons, is relatively low in Korea, but because low absorption is likely to limit incomes, reduce job choice, and hold back improvements in working conditions. Authoritarian regimes have used economic success as a means of acquiring legitimacy in Korea and this, as a practical matter, might include increased job opportunities, rising real incomes, and better working conditions as well as the rapid growth of investment, exports, and other macro-economic aggregates. It is difficult to construct acceptable generalizations about working conditions, or to find evidence on access to jobs when unemployment is not a good indicator of labor market conditions, as in Korea. Real wages, another indicator of labor market conditions, show improvement from the early 1970s to 1977-78, then a decline in 1979 and constancy since then at the 1979 level.

Information on wages, hours and, possibly, working conditions, is consistent with recent economic slowdown. Wage and price controls imposed by the Chun regime to curb inflation have probably restricted wages more than prices if their impact is at all typical. Already weak labor unions were further weakened by new labor-law provisions adopted in 1981. Recent government policies evidently favor management in labor-management relations. Improvement in wages, hours, and working conditions is likely to come only when the current recovery has continued long enough to increase significantly the demand for labor. If this happens, since stabilization has been achieved in part by wage controls, future wage negotiations are likely to prove difficult as workers push to make up for earlier losses. Negotiations may even be destabilizing if

the government proves unwilling to accede, at least in part, to demands for higher wages.

Both the Chun regime and the Park regime before it have been military, bureaucratic-authoritarian regimes. They have played an active, even interventionist role in economic affairs, not so much because of the large size of the government sector, but because intervention has generally worked successfully and the government has had the means to implement its economic policies. Though the size of Korea's public sector cannot be measured for various reasons, it is probably not very different from the average for its group of middle-income countries. What is different is the unusual importance of public enterprises, which may follow from good performance and a pragmatic approach to issues of public versus private ownership. The same pragmatic approach seems to govern intervention. If government intervention works, it is continued. If not, other intervention ... or a shift to the market mechanism ... is tried until some alternative can be found that does work. That activist policies have generally proved successful can be seen in international growth-rate comparisons for the period from the mid-1960s to the late 1970s. These show that Korea's rate of economic growth was among the world's highest.

Though growth was rapid until the late 1970s, the upward trend reversed dramatically in 1980 when output actually declined. Since then, the economy has stagnated as the pace of growth has fallen well below earlier levels. The reversal can be attributed to the second oil shock, a disastrous harvest, and President Park's assassination and subsequent political disarray, but it was also a consequence of accelerating inflation that had its roots in earlier government policy actions. Chief among these was an obsessive emphasis during the late 1970s on expanding the heavy and chemical industries that unbalanced the economic structure, created consumer-goods shortages, and thus proved



inflationary. One consequence of this debacle after the inauguration of the new Chun regime was the announcement in the Fifth Plan (1982-1986) and elsewhere that henceforth the economy would be guided less by government controls, more by the market mechanism. This announcement and subsequent actions that tend to confirm it ... such as the divestiture by the government of its controlling shares in the nation's commercial banks ... should show that the Chun regime will play a much less active role in the economy than did the Park regime.

Now, two years after the Fifth Plan was released, there is reason to be skeptical about the prospect of any significant change in the government's economic role. Though the government sold the commercial banks, it still controls them through the Monetary Board. Imports have been "liberalized", but are still highly restricted by international standards. There are no signs that the government is relinquishing its power to allocate credit where credit allocation is the main instrument of economic control. It may be too much to expect that power will be relinquished voluntarily, or that controls can be relinquished in two years. Also, "less guidance" can be interpreted in various ways, so that less guidance in Korea may mean "highly controlled" in the United States or in other more market-oriented economies. Still, there seems to be a discrepancy between rhetoric and fact. What is clear is that there has been a shift in economic policy circles, so that people with more liberal, market-oriented views have gained influence at the expense of those with more traditional, interventionist views. These more liberal views should prevail until the next economic crisis shifts the balance of power among policymakers. There are now no signs of impending crisis ... in fact, the economy appears to be in the early stages of a recovery ... and so a return to the more traditional approach seems unlikely in the foreseeable future.

The dominant single policy theme since the first few years of the Park regime, and perhaps the most important single characteristic of Korea's rapid growth for almost two decades, has been export expansion. Even the relapse into import substitution of the late 1970s was justified as a means for increasing future exports. The emphasis on export expansion, which is so strong that it is difficult to visualize, follows from a "production-first" approach to economic development in which social goals have placed a distant second to rapid output growth. There is some justification for this approach on equalitarian grounds as redistribution came first in Korea, growth later, so that the benefits of growth have been fairly evenly distributed, but the main justification is that output, incomes, and employment are now much greater than they would have been without rapid export expansion. The data show that this approach has been successful, whatever its justification. The growth of national product accelerated in the mid-1960s and continued at high rates because industrial output soared, while industrial output rose fastest in manufacture for export. Korea's growth, in short, has been export-led growth of a sort found only in a few other, smaller East Asian miracle economies.

Output for export has been encouraged by export-promotion policies and rapid world-market expansion through the early 1970s, but the main reason for rapid export expansion has probably been the capacity of Korean firms to tap their considerable advantage in labor-intensive manufactures. This advantage, particularly during the 1960s and early 1970s, can be traced to low wage costs, or to relatively cheap and relatively productive labor. Since then, advantage has been shifting toward more capital-intensive production, partly because Korea's endowments of human and physical capital have grown more rapidly than its endowments of unskilled labor, partly because of increasing competition from other, lower-wage countries. The shift should continue as the government's

current industrial policy emphasizes the expansion of "skill-intensive" ( i.e., human-capital intensive ) industries with export potential. Though the doctrine of comparative advantage may explain the composition and changes in the composition of Korea's exports, it does not go very far in explaining why rapid export expansion should lead to rapid output growth.

The connection, in Korea's case, seems to be a high-growth strategy in which high rates of GNP growth are linked, via investment and foreign borrowing, to export earnings and to the capacity to service a large foreign debt. Now that worldwide recession has slowed and possibly halted Korea's export expansion, there are immediate questions of whether Korea can handle its foreign debt or will default, and of whether exports and therefore growth rates are likely to increase again in the near future. The information now available indicates that default is unlikely, but that the short-term export outlook is poor. The long-term outlook, however, is much more promising. Given earlier successes in mastering new technology and in implementing industrial policies, Korea is likely to become a major factor in the large, and potentially much larger world markets for skill-intensive manufactures.

## II. Agriculture as a Lagging Sector

Agriculture is a lagging sector in Korea and in most other developing countries if only because of Engel's Law, which postulates low income elasticity of demand for food. As incomes rise with development, the share of food in household expenditure falls. Korea's unusually rapid development has accentuated the lag in agriculture as have a series of five-year plans which, by promoting industrialization and export growth, have diverted resources to other uses that might have gone to agriculture. The lag can be seen in agriculture's output share, which fell from around 40 percent of gross domestic product in 1960-62 to 17 percent in 1981-82, and in agriculture's labor-force share, which fell from almost two-thirds of total employment in the early 1960s to 32 percent in 1982. Comparison with similar statistics published by the World Bank for Korea's group of 63 middle-income countries shows that agriculture's output and employment shares have dropped more in Korea than in other, comparable countries.<sup>2</sup> These declines are statistical artifacts; agriculture has lagged more in Korea than elsewhere because industry has grown faster in Korea. Nevertheless, they are significant because they point to the likelihood of further declines and inadequate supply, and because a lagging agriculture has raised immediate and basic policy issues. The immediate issue pits the distributional and political benefits of supporting farm prices against the budget deficits, money-supply expansion, and the other costs of support. The basic issue is a resource allocation issue that sets strategic, social, and political considerations favoring agricultural self-sufficiency against economic considerations ( the tenets of comparative advantage ) that favor greater reliance on imports.

Changes in shares are relative changes, of course, which should not be allowed to obscure absolute growth. Korea's agricultural output grew at

annual average rates of 4.4 percent during the 1960s and 3.2 percent during the 1970s, both rates that are above the World Bank's middle-income-country average. Output growth was achieved with little overall increase in labor inputs as farm employment first rose to the mid-1970s and then fell below earlier ( mid-1960s ) levels in 1981-82. The record is good, but not good enough to satisfy the expansion in domestic demand as population and real per capita income have both increased. From 1967 through 1981, for example, Korea's population rose by 28 percent and per capita GNP increased 2.5 times. Agricultural output ( real GDP originating in agriculture ) rose 54 percent during this period, but real food consumption doubled.<sup>3</sup> Food and feed grains imports, in consequence, have increased sharply in recent years to around \$2 billion a year in 1980-82.

Sources of the relatively good agricultural performance are of interest because they explain what has occurred and suggest possible future development. Among these sources are the conventional supply side factors such as land, labor, and capital, current inputs like fertilizer, seed and pesticide, and the institutional arrangements used to provide credit, research and extension services. In addition, government pricing policies and restrictions on agricultural imports have affected farmers' incentives and therefore agricultural output. Demand side considerations are also significant, particularly the major increases in average incomes that have not only expanded overall demand but have also shifted demand toward meat, fruit, vegetables, and other more income-elastic foods.

Shortage of arable land is probably the major single limitation on Korea's agricultural development. Of a total land area of 99 thousand square kilometers, only 20 percent is cultivable. Despite introduction of the "Utilization and Preservation of Cultivated Areas Act" in the early 1970s, and attempts to reclaim and develop land for agriculture, the spread of cities and construction

of industrial complexes on farmland have significantly reduced the stock of agricultural land since 1960s. Land has been extended by double cropping, and by intercropping, but utilization rates (i.e. land used ÷ cultivated area) have fallen from approximately 140 percent in the mid-1970s to 126-27 percent in the early 1980s. Almost two-thirds of cultivated land is paddy field, of which three-quarters is fully irrigated. Most cultivated land is used to produce rice, with significantly smaller areas used to grow barley, wheat, and vegetables, though this pattern is changing as a consequence of increased fruit and vegetable cultivation in upland areas and in areas with direct access to cities. One possible offset to land shortage has been the widespread adoption of plastic-covered frames in recent years to increase the growing season for fruit and vegetables. Little is known of the extent of this practice, but casual observation indicates that it is widely used, particularly in farming areas near cities.

Labor has traditionally been abundant in Korean farming and, since land reforms during the 1940s and 1950s, the typical operating unit has been a very small, family-owned holding divided into several non-contiguous plots and farmed by extremely labor-intensive methods. Even today more than half of Korea's two million farm households farm less than one hectare. Activity is concentrated in the cultivation of field crops rather than in producing livestock so that cultivation accounts for 85 percent of the value of farm output, livestock production (including sericulture) only 15 percent. Labor inputs per operating unit have declined fairly continuously since the mid-1960s as has the number of units. Also, the composition of labor inputs has changed in ways which foreshadow a further decrease in labor intensity. For instance, an increasing portion of the total is provided by unpaid female family labor and by exchanged labor, a decreasing proportion by hired labor, especially among the largest operating units. The decline in hired-labor inputs has coincided with sharp

increases in the index of farm wages, particularly heavy out-migration by young male workers and reports of labor shortage during seasons of peak farm activity. Traditional labor abundance has evidently given way to shortage, and to renewed emphasis on farm mechanization in the Fifth Five-Year Plan (1982-86).<sup>4</sup>

While machinery is a well-recognized substitute for labor, other forms of fixed capital can be substituted for land even though capital is typically distinguished from land because it is a reproducible, not a natural resource. In Korea and other East Asian rice-growing agricultures, paddy-field construction and irrigation are major forms of capital formation that have contributed to output growth and "should be thought of as a capital input rather than a 'natural resource'".<sup>5</sup> Such land improvement is probably the largest single component of fixed capital formation in agriculture (individual components are not shown in the published national accounts). This fixed capital formation, in turn, has doubled in real terms during the past decade and has constituted 7-10 percent of total fixed capital formation. Investment in farm machinery has probably been the next most important component of fixed capital formation. This investment has apparently followed a typical Asian pattern which first involves the mechanization of grain processing, next the substitution of power pumps for human labor during the peak seasons, and last the increasing use of power tillers and tractors. Mechanization has been limited in the past by low rural labor costs and is still limited by the small size and irregular shape of individual plots and by insufficiency of the credit needed for purchasing machinery. These last problems seem to be recognized in current government plans because mechanization is to be directed toward consolidated land areas and focused on expanding the number of mechanization centers where machinery is to be utilized collectively.<sup>6</sup>

Most of the increase in agricultural output during the past two decades has probably resulted from expansion of current inputs such as fertilizers, pesticides, and improved seeds, particularly since inputs of two of the three conventional supply factors ... land and labour ... actually declined, while the rate of fixed-capital formation was well below output-growth levels before the 1970s. This conclusion is necessarily tentative, however, because it is contradicted by formal econometric estimates of the contribution of the various inputs to the increase in agricultural output which show a near zero and statistically insignificant contribution for working capital ( i.e. current inputs).<sup>7</sup> Fertilizer inputs expanded sharply from the early 1960s after domestic production began, and continued to expand until the mid-1970s. Consumption, which was then approaching Japanese levels ( the state of the art), has since levelled off, partly as a result of escalating prices and, during the past few years, partly because of a switch back from the Tongil (high-yield varieties) to the traditional japonica strains which require less fertilization.<sup>8</sup> Much of the output growth before the mid-1970s probably resulted from increases in fertilizer inputs. Pesticide production, especially output of fungicides and herbicides, has expanded rapidly since the early 1970s. The causal link between increases in pesticide inputs and output growth is perhaps less obvious than that between increases in fertilizer inputs and output growth but, like fertilizers, pesticides are output augmenting or land saving.

A new rice, the Tongil high-yield variety (HYV) brought the Green Revolution to Korea after it was widely disseminated to farmers in 1974. There was a quantum leap in output and yield levels with the new HYV and, after four years in which output exceeded demand (1975-78), it was thought that Korea had achieved self-sufficiency in rice production. The Tongil, actually a series of japonica - indica hybrids first crossed in 1965, requires earlier planting and a number of other differences in handling from the traditional varieties, but



provides as much as 40 percent higher yields because it can withstand heavier rates of fertilization. By 1978, more than three quarters of all paddy was sown in Tongil. Since then, however, Tongil has been less widely used because it proved more sensitive to cold and to blast ( a fungal disease ) than the traditional japonica after blast reduced production in 1979 and unusual cold in 1980 was followed by a disastrous harvest.

The rapid spread of Tongil and the failures of 1979-80 illustrate the strengths ... and weaknesses... of Korea's agricultural institutions. Among the major insititutions are the National Agricultural Cooperative Federation (NACF), which supplies credit to rural areas, the Ministry of Agriculure and Fisheries (MAF), the Office of Rural Development (ORD), a largely independent organization attached to the MAF which conducts research and extension (guidance) activities, and the Ministry of Home Affairs (MHA) which controls local administration and is largely responsible for implementing saemaul undong, or the New Community Movement (NCM). Administration is highly centralized and reaches down through the nine provinces to the county (gun) level where officials are located in the primary market town that is the focal point for the area's rural population. The Tongil rice was widely promoted and the promotion was highly successful because of high-level concern, integrated action, and effective implementation at the village and county levels. Actual implementation was based on detailed provincial plans that specified the output goals needed to meet the national target for rice production which, in turn, was set to achieve self-sufficiency. In the process, known problems of rice blast and susceptibility to cold were ignored in the effort to meet goals. As one observer noted, "ironically, the failures of 1979 and 1980 can be attributed to the strengths of the Korean guidance service." <sup>9</sup>

The hierarchical, goal oriented, and high-pressure characteristics of the administrative system produce unusually effective policy implementation so that success or failure of any program or institution is likely to reflect public priorities more than institutional strength or weakness. The fact that agricultural credit was insufficient in the 1960s to supply the funds needed for farm mechanization, for example, follows more from government credit allocation policies that favor industrialization and export expansion at the expense of other programs than from the NACF's inability to expand medium and long-term loans for machinery purchases. In contrast, the New Community Movement has been successful in transforming village infrastructure through self-help projects and in strengthening local administration. It has probably also helped to raise rural incomes and promote agricultural productivity. The NCM has been successful because it has gotten full presidential backing since it was started at the end of 1971 by President Park.<sup>10</sup> The NCM was a response to erosion of rural support for the government in the elections of 1971, phasing out of American PL 480 (food grains) assistance and the consequent need to increase domestic food production and, possibly, to the especially massive rural-urban migration of the late 1960s and other signs that rural areas were not sharing the benefits of development. Whatever the motivation it is significant that the NCM began shortly after a major change in the government's food-grains price policies, from a low-price policy before 1968-69 to a high-price policy afterward.

Since the enactment of the Grain Management Law in 1950, the government has bought, transported, stored, milled and sold food grains. It also controls exports and imports. In recent years, the government has handled more than half the rice and more than 90 percent of the barley that has been marketed. Acquisition has been through direct purchases, rice-fertilizer barter (fertilizer distribution is controlled by the agricultural cooperatives, i.e., the government), and taxes in kind. It has been necessary to requisition government grain

from farmers because purchase prices were below the cost of production through 1960, and have been below market prices in most subsequent years. The government raised the purchase price of rice and barley in 1968, and initiated a so-called "two-price system" in 1969 by lowering selling prices. This was done to support rural incomes and expand food production while curbing wage costs and restricting inflation.<sup>11</sup> Since the selling price has typically failed to cover purchase and handling costs, the government's grain-management accounts have been in deficit most years since 1969. These deficits have been financed largely through long-term overdrafts with the Bank of Korea and these overdrafts, in turn, have accounted for significant shares of recent increases in the money supply. As one set of observers noted in 1980, "...the expanding scale of the government deficit due to the two-price system has emerged as one of the serious constraints on farm price policy."<sup>12</sup>

The two-price system can be faulted for its inflationary financing, but the main issues are whether it has in fact increased farmers' incomes and output and, if so, whether these increases have been sufficient to narrow significantly the farm, non-farm income gap. There is no evidence on the output consequences of price supports, though one would expect a positive supply response to higher prices despite an income effect that might reduce the proportions marketed of high-value food crops like rice. Indexes of prices paid and received by farmers show that the decline in the terms of trade (prices received ÷ prices paid) that began in 1963 reversed in 1969, and that terms remained quite favorable (in the 111-114 range, where 1970 = 100) before declining again in 1979 through 1982. These terms indicate that price supports would account for somewhat more than 10 percent of the increase in the on-farm portion of real agricultural income through 1978, and somewhat less afterward if, in their absence, the terms of trade had remained at late 1960s levels.

Parity may be too much to expect from price support programs, as would an end to the decline in output and employment shares that have made agriculture a lagging sector. Still, the narrowing of the gap between farm and non-farm income contributes to distributive equality, and should prevent a repetition of the particularly heavy urbanward migration of the late 1960s that over-burdened infrastructure in Korea's principal cities.<sup>13</sup> Comparisons of farm and non-farm incomes in Korea are based on urban family and farm household surveys that were not designed for the purpose so that the results differ according to the kinds of adjustment used to increase comparability. Differences in rural-urban living costs, household size, tax burdens, or in treatment of farm inventory evaluation and the imputed rental value of owner-occupied homes are sufficiently important that estimates for the same year have shown farm-household income either 32 percent more or 28 percent less than urban-household income! Trend rather than level is of primary interest, fortunately, because here there is some agreement. Parity ratios (farm income ÷ urban income), which move much like the farmers' terms of trade, fall from 1963 to 1969, then rise through the mid-1970s before declining again in the late 1970s.<sup>14</sup> These movements are also consistent with annual rates of decline in the farm population, a crude proxy for migration, which dropped from 1966-70 to 1970-76 before rising again in 1976-81.

Recent downward trends in terms of trade and in parity ratios seem likely to continue through the mid-1980s. One reason is the Fifth Plan's emphasis on raising agricultural productivity rather than on price supports, evidence of which was recently seen in the decision to freeze the government's 1983 barley purchase prices at 1982 levels. More important than price supports are the supply factors that determine productivity and output growth. Other than planned increases in capital inputs (i.e. mechanization, which substitutes for labor rather than augments land, Korea's scarce factor), there are no

indications that major inputs are likely to rise significantly, and a strong likelihood of further declines in land and labor inputs. Output and production should still increase, though gradually, as the shift from food grains to fruit, vegetables, livestock, and other high-value cash crops continues.<sup>15</sup> Any significant increase in food-grains production, after the Tongil debacle, can only follow the introduction of a new blast and cold resistant HYV. Considering the ten-year lag between Tongil's initial hybridization and dissemination, this seems unlikely to occur before the end of the 1980s.

The government's emphasis on price stabilization, though successful, is likely to continue after the Fifth Plan is revised later this year. This raises a question of whether, given the widely recognized inflationary consequences of the two-price system, price supports are likely to be phased out. An additional and less widely appreciated reason for support reduction might be the adverse effect of supports on food prices, hence on real incomes, wage costs, and export competitiveness. Even though the government sells at a loss under the two-price system, domestic food prices are much higher than world market (import) prices or prices in other export-competing countries like Taiwan because imports have had to be severely restricted to maintain support levels.<sup>16</sup> Despite real-income as well as inflationary costs of supports, which may be quite substantial, there seems little likelihood that supports will be ended, food-import restrictions lifted, or that the government will stop pursuing the chimera of food-grains self-sufficiency.

One reason to expect the present system to continue is that a quarter of the population is still engaged in agriculture and even though Korea's farmers may lack the political clout of their Japanese counterparts, the proportion of full-time farmers (i.e., those with a direct interest in price supports) in the labor force is three times as large in Korea as in Japan. Another reason is that any solution to the parity problem...if there is one...probably lies in

significantly expanding farmers' off-farm incomes. The unusually high geographic concentration of industry in Korea has limited farmers' off-farm earnings opportunities and, despite current plans to encourage the spread of industry, dispersal is a long-run, not a short-run process.<sup>17</sup> Another reason, suggested by Vincent Brandt, is that ministries with farm and rural constituencies (the Ministries of Agriculture and Fisheries and of Home Affairs) oppose attempts by those with general responsibility for economic affairs (The Economic Planning Board and its research arm, The Korea Development Institute) to phase out price supports. Such opposition is aided by arguments that continuation of price supports reduce off-farm migration and promote rural stability and contentment. The most important reason, perhaps, is a strategic one, and this is the desire to avoid the risks of supply interruption or price extortion associated with dependence on imports. The Nixon administration's stoppage of soybean exports to Japan, and recent attempts by an American rice broker to block rice exports to Korea or the move by Australian meat packers to cartelize export sales to Korea are cases in point.<sup>18</sup> They indicate that the government may have to subsidize high-cost, uneconomic domestic production when import supplies are unreliable and import prices subject to manipulation.

### III. Labor Absorption

One great benefit of Korea's accelerated growth from the mid-1960s to the late 1970s was the increase in labor absorption as output expansion generated the additional demand needed to employ new entrants and more fully employ established workers. The dramatic reversal in output growth of 1979-80, subsequent industrial stagnation, and a significant increase in numbers of potential entrants resulting from the post-Korean War baby boom have once more raised the specter of increased unemployment and inadequate absorption. The Fifth Plan's major macroeconomic targets reflect current concern for raising output and employment above 1980-91 levels since an output-growth target for 1982-86 was set that would generate enough additional employment to offset expected productivity increases and hold unemployment down to four percent, or below 1980-81 levels. Though evidence is now accumulating (in mid-1983) of an economic upturn, performance during 1982 was not good enough to reach the Plan's output and employment goals.<sup>19</sup>

Unemployment is not a problem, it may be argued, since plan performance is of interest mainly to planners, Korea's worst unemployment (5.2 percent in 1980) is insignificant when compared with double-digit levels in the United States and other advanced industrial countries, labor organizations are too repressed in Korea to create disturbances and, furthermore, experience elsewhere indicates that labor unrest is more likely to occur when supply is tight than when the economy is stagnant. These arguments are all partly but not wholly correct. The military regime's mandate, to take the first point, is based at least in part on economic performance that is sufficiently good to generate jobs for those who want them. Unemployment statistics are downward biased because the self-employed and family workers still account for over a third of non-farm employment. Unemployment among employees from non-farm

households, the population at risk, was over 12 percent in 1980, and still over 10 percent in 1982, despite pressure by the government on employers not to lay off workers. The proportion of manufacturing workers working below-average work weeks rose sharply in 1980-81 before falling back last year.<sup>20</sup> Finally, though labor organizations are weak in Korea, particularly since legislation adopted in December 1980 has limited the unions' capacity to organize and represent labor, it was a combination of students and workers who overthrow the Rhee regime in 1960 and led the Kwangju revolt in 1980, both years of particularly poor economic performance. Strong unions and tight labor supply are evidently not needed for workers to attack the regime.

While the recent worldwide recession has slowed growth in Korea as elsewhere and created problems of labor absorption, Korea evidently passed the turning point (from labor surplus to labor shortage) around 1975.<sup>21</sup> Since labor is now a scarce factor, future growth and structural change . . . the Fifth Plan emphasizes expansion of skill-intensive industries . . . should depend at least in part on the determinants of supply and demand in labor markets.

Population growth has been declining from an annual average rate of 3.02 percent in 1955-60 to an expected 1.55 percent during the Fifth Plan period, mainly as a result of rapid economic development and the initiation of an unusually effective family-planning program in the early 1960s. These are reflected in a drop in the number of people aged 0-14 since 1966 so that after the babies of the post-Korean War baby boom enter the labor force during the early and mid-1980s, the number of new entrants should begin to decline. The recent doubling of college entering classes will also reduce numbers of entrants, but only in the short run. More important in terms of keeping younger people out of the labor force has been the rapid expansion of secondary schooling. The



proportion of those employed who are educated through the secondary level rose from 26 percent in 1970 to 43 percent in 1980. These demographic and educational trends, both of which work to reduce supply, are offset by an increase in female labor-force participation that added 400 thousand workers to the labor force from 1970 to 1980. Though aggregate activity figures and upward bias in the participation rate tend to conceal it, increased participation by women is the major potential source of future labor-force expansion.<sup>22</sup>

Large changes in labor supply are inconceivable except in the unlikely event that demand for overseas construction services collapses (over 200 thousand Korean construction workers were abroad in 1982) or the armed forces (500-600 thousand men) are demobilized. Large changes in demand, in contrast, are evident not only in the unemployment and underemployment of 1980-81, but in the changing sectoral structure of the labor force as the output mix responds to changes in the composition of demand. Other factors that affect employment and labor-force structure are inter-industry differences in labor intensity and in productivity growth as mechanization and new technology spread unevenly through the economy. For instance, the overwhelmingly important development of the 1970s, a continuation of the change in the 1960s that is likely to proceed though at lesser rates through the 1980s, has been a shift in employment and output from agriculture to industry. The shift involves decline in a highly labor-intensive sector where low productivity increase has limited employment reduction and the rise of a sector where low labor intensity and high productivity growth have limited employment expansion. Much of Korea's employment growth in the 1970s was therefore possible only because the rapidity of industrialization more than offset the industrial sector's low labor intensity and high productivity gains. If industrial output had grown no more than the average for agriculture and the services, employment would have grown by 1.3

million from 1970 to 1980, not the actual 2.5 million shown in Table 1 (next page).

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Table 1 shows levels and distribution of employment and output in 1970 and 1980 for the agriculture, industry, and service sectors and the components of the last two sectors. The figures are taken from census estimates rather than from labor-force surveys because the surveys provide insufficient industry detail, and because the census estimates for 1980 were finally released at the end of 1982. These estimates and national-accounts data show the decline of agriculture, rise of industry, and stability of services in the employment and output totals, plus the relative importance of subsectors and intra-sectoral variation. Employment and output in the three major industry categories each increased faster than the all-sector average, for instance, while mining employment fell. In the service sector, employment-output shares expanded for trade, one of the larger categories, and fell for community-social-personal services, the other. This last, a residual category, declined because large increases in community-social-employment (about half teachers) and output were more than offset by small increases in the government sector and a large drop in household-personal services.

Three measures that relate employment and output are given in Table 2 for the three sectors and in Table 3 for components of industry and services. The first is a measure of labor intensity, or man years per million won of output in 1970. Labor intensity is shown to be much higher in agriculture than in the other sectors, and particularly low for the utilities (electric-water-gas) and finance-insurance-real estate. Since the measures are based on employment rather than actual labor inputs, adjustment for average hours worked would reduce the figure for agriculture from 2.68 to 1.94, which is still above the

Table 1 - Employment and Output in 1970 and 1980

A. <u>Employment</u>	1970		thousands 1980	
	<u>.Number</u>	<u>%</u>	<u>.Number</u>	<u>%</u>
1. <u>Agriculture, forestry, Hunting and fishing</u>	<u>5,157.0</u>	<u>50.8</u>	<u>4,794.7</u>	<u>37.8</u>
2. <u>Industry</u>	<u>2,369.1</u>	<u>23.3</u>	<u>4,139.9</u>	<u>32.7</u>
a. Mining	99.6	1.0	90.6	0.7
b. Manufactures	1,447.5	14.2	2,797.0	22.1
c. Construction	462.0	4.6	664.4	5.2
d. Electric, Gas, Water	30.8	0.8	36.5	0.3
e. Transport, Storage, Communications	329.2	3.2	551.4	4.4
3. <u>Services</u>	<u>2,626.8</u>	<u>25.9</u>	<u>3,747.3</u>	<u>29.5</u>
a. Trade (+restaurants, hotels)	1,286.2	12.6	2,058.6	16.2
b. Finance, Insurance, Real Estate	96.5	1.0	285.7	2.3
c. Community, Social, Personal	1,222.3	12.3	1,402.6	11.0
<u>Total</u>	<u>10,152.9</u>	<u>100.0</u>	<u>12,681.9</u>	<u>100.0</u>
B. <u>Output</u> <sup>a</sup>	billions of 1975 <u>won</u>			
1. <u>Agriculture, forestry, Hunting and fishing</u>	<u>1,925.13</u>	<u>34.0</u>	<u>2,196.09</u>	<u>17.6</u>
2. <u>Industry</u>	<u>1,710.78</u>	<u>30.3</u>	<u>6,172.55</u>	<u>49.6</u>
a. Mining	108.76	1.9	178.29	1.4
b. Manufactures	909.06	16.1	3,812.78	30.6
c. Construction	335.83	5.9	864.92	7.0
d. Electric, Water, Gas	48.92	0.9	212.45	1.7
e. Transport, Storage Communications	308.21	5.5	1,104.11	8.9
3. <u>Services</u>	<u>2,020.51</u>	<u>35.7</u>	<u>4,091.27</u>	<u>32.8</u>
a. Trade (+restaurants, hotels)	992.49	17.5	2,313.65	18.6
b. Finance, Insurance, Real Estate	164.48	2.9	479.35	3.8
c. Community, Social, Personal	863.54	15.3	1,298.27	10.4
<u>Total</u>	<u>5,656.42</u>	<u>100.0</u>	<u>12,459.91</u>	<u>100.0</u>

Sources: Bank of Korea, Economic Statistics Yearbook, 1982; Economic Planning Board, 1970 Population and Housing Census Report (Vol. 2, 10% Sample Survey, 4-1, Economic Activity), 1980 Population and Housing Census Report (Vol. 2, 15 Percent Sample Survey, 4-1, Economic Activity).

a. Gross domestic product at 1975 prices, less output from ownership of dwellings.

Table 2 - Employment and Output: Labor Intensity, Productivity, and Relative Growth, 1970-1980.

	<u>Agriculture</u> <sup>a</sup>	<u>Industry</u> <sup>b</sup>	<u>Services</u> <sup>c</sup>	<u>Total</u>
<u>Employment (n), thousands</u>				
1980	4,794.7	4,139.9	3,747.3	12,681.9
1970	5,157.0	2,369.1	2,626.8	10,152.9
Change ( $\Delta n$ )	- 362.3	1,770.8	1,120.5	2,529.0
Growth rate ( $G_n$ ) <sup>d</sup>	- 0.73	5.7	3.6	2.2
<u>Output (y), billion won</u> <sup>e</sup>				
1980	2,169.09	6,172.55	4,091.27	12,459.91
1970	1,925.13	1,710.78	2,020.51	5,656.42
Change ( $\Delta y$ )	270.96	4,461.77	2,070.76	6,803.49
Growth rate ( $G_y$ )	1.3	13.7	7.3	8.2
<u>Labor Intensity (n/y)</u> <sup>f</sup>	2.68	1.38	1.27	1.79
<u>Productivity Indexes for</u> <u>1980, 1970=100</u>	123	206	142	176
<u>Labor Absorption Rate of</u> <u>Income Growth (<math>G_n/G_y</math>)</u>	- 0.55	.42	.49	.27

a - agriculture, forestry, and fishery.

b - mining; manufacturing; construction; electricity, gas, and water; transport, storage and communications.

c - all other (trade, restaurants and hotels; public administration; community, social, and personal services).

d - Compound annual (geometric average) rate.

e - Gross domestic product at 1975 prices, less output (income) from ownership of dwellings.

f - Man years per million won of output in 1970.

Sources: as in Table 1.

Table 3 - Labor Intensity, Productivity, and Relative Growth Within the Industrial and Service Sectors, 1970-1980.

	<u>Mining</u>	<u>Manufacturers</u>	<u>Electric Water, Gas</u>	<u>Construction</u>
- <u>Labor Intensity</u> (n/y)	0.92	1.59	0.63	1.38
- <u>Marginal Productivity</u> <sup>a</sup> ( $\frac{y + \Delta y}{y + \Delta n} \div \frac{y}{n}$ )	180	217	366	179
- <u>Labor Absorption Rate of Income Growth (Gn/Gy)</u>	-.19	.44	.11	.37
	<u>Transport, Storage, Communication</u>	<u>Trade</u>	<u>Finance, Insurance, Real Estate</u>	<u>Other Services</u>
- <u>Labor Intensity</u> (n/y)	1.07	1.29	0.59	1.42
- <u>Productivity Indexes</u> for 1980, 1970 = 100 ( $\frac{y + \Delta y}{n + \Delta n} : \frac{y}{n} \times 100$ )	214	145	98	131
- <u>Labor Absorption Rate of Income Growth (Gn/Gy)</u>	.39	.55	1.02	.33

Sources: as in Table 1.

level for other categories. The low figure for highly capital-using utilities is expected, but not that for finance-insurance-real estate. Output information is not available for each of these subcategories, but the large share of financial institutions in the employment total suggests that banks are particularly capital intensive or, more likely in 1970, that output (income) was high because the government's monopoly of banking and the scarcity of capital raised the value of financial services. Beside large differences among categories, a major development here (not shown in the tables) has been the sharp drop over time in labor intensity. The average number of man years per million won of output fell 42 percent from 1963 to 1970 and another 43 percent from 1970 to 1980. Again, man years of employment should be adjusted for changes in the average work week before concluding that labor intensity or labor input per unit of output has in fact declined or that the inverse, output per unit of labor input, or productivity, has risen. The increase in the average workweek from 47.5 hours in 1963 to 48.3 in 1970 and 54.0 in 1980 has been insufficient, however, to offset the decline.<sup>23</sup>

The productivity measures presented in Tables 2 and 3 both show, in the index form, the change in output per worker from 1970 to 1980. Overall productivity increased 76 percent from 1970 to 1980, an average of 5.8 percent a year. This is probably the best single indicator of the impact of investment in human and physical capital and of the application of new technology on Korea's economic performance, and it shows that the impact was substantial. Except for the finance-insurance-real estate group, estimates for individual categories appear reasonable.<sup>24</sup> Productivity increase was particularly pronounced in the industrial sector and, within industry, in manufacturing and such capital-intensive categories as electric-water-gas and transport-storage-communications. One reason may be manufacturing's role as the principal export sector and government policies that allocate credit in

ways which have favored export growth. Since the investment-output relationship typically requires relatively little investment per unit increase in output for manufacturing (incremental capital-output ratios are low) and manufacturers have accounted for more than their share of non-residential fixed capital formation since the early 1960s, large productivity increases would be expected. The government's emphasis during the late 1970s on expanding particularly capital-intensive manufactures like steel and chemicals should also show up in productivity increases by 1980. Productivity increase in the utilities and transport categories may have been above-average because these categories have maintained large shares of a rapidly expanding investment total. Utility investment accelerated in response to power shortages in the late 1960s and again in 1976 and afterward with the development of nuclear generating capacity. Similarly, transport investment doubled from 1966-67 to 1971-72 as the national highway network was developed to break a railway bottleneck. Productivity may have also increased because of the "lumpiness" of fixed-capital formation in utilities and transport. Small electric generating plants are uneconomic, for example, while highways cannot be built half-a-lane at a time. Both capital and labor are thus initially underutilized, but as demand increases, productivity rises because output expands with no increase in employment as labor is more fully employed.<sup>25</sup>

Aggregate productivity generally increases because of increases within individual categories and because of a shift in labor-force composition toward categories with above-average increases. This shift is seen in the employment categories where productivity more than doubled (manufacturing, electric-water-gas, transport-storage-communications). These categories accounted for 17.8 percent of total employment in 1970, and 26.7 percent by 1980. Since productivity increase competes with employment expansion and productivity increase was substantial, employment was undoubtedly lower in 1980 than it would have

been if productivity had not increased or had increased less.<sup>26</sup>

The third measure given here, the labor-absorption rate of income (output) growth, relates annual (compound or geometric) growth rates for employment ( $G_n$ ) to those for income or output ( $G_y$ ) in the form  $G_n/G_y$ . Because this ratio measures the relative growth of employment and output, it can be used to show the amount of absorption per unit rise in output or its inverse, the rise in output associated with a unit increase in employment. It is related to both intensity and productivity in that absorption rises with rising labor intensity and falls with rises in labor productivity. Labor absorption in industry and the services has been almost twice the national average because labor has not been absorbed by agriculture but, on the contrary, has been expelled. Separate calculations for the numerator and denominator of  $G_n$  and  $G_y$  show that employment grew more in industry than in the services, but that this greater increase was more than offset by higher output growth (see Table 2). Overall, the labor absorption rate of output growth of 0.27 indicates that output (income) rose 3.7 percent ( $\frac{1}{.27} = 3.7$ ) for each one percent increase in employment during 1970-80.

Table 3 shows wide variance in labor absorption rates within the industry and service sectors. Absorption was negative in mining, partly because the demand for coal (the major mineral) stagnated after oil was substituted for coal in firing electric generators shortly before the first oil shock, partly because of average (but substantial) productivity increases. Labor absorption was low in the electric-water-gas category because of unusually high rates of productivity increase, but productivity increase cannot be invoked to explain the low absorption rate for other (community-social-personal) services. As with coal this was probably due to sub-average increases in demand and possibly to a shift in employment composition toward more productive jobs as the flight from domestic (household) services slowed employment growth.<sup>27</sup> Apparently



high labor absorption in the finance-insurance-real estate category results from the same overstatement of output in 1970 that produced unrealistically low estimates for labor intensity and productivity increase. A more realistic estimate would be lower than the 1.02 shown. Relatively high absorption in trade, the largest service sector, accounted for 30 percent of employment growth during the 1970s. This is a category where large units are more efficient as sales per employee or per unit of floor space rise with establishment size. There is little evidence that trade is the dumping ground for surplus labor that it may have been in the 1960s, nor is it clear that scale increase has yet been sufficient to restrict labor absorption.<sup>28</sup>

Productivity increase, change in demand, and other specific industry characteristics can be used to explain labor absorption in the three major sectors and their components, but absorption is also influenced by anything that alters the relative price of labor and capital or changes the scale of operations. The shift from import substitution to export expansion in the mid-1960s, for instance, increased absorption because Korea's exports are more labor intensive than its import substitutes and because export production has substantial indirect employment effects.<sup>29</sup> In contrast, the emphasis on expanding iron, steel, chemical, and other capital-intensive and import substitute production during the late 1970s would reduce absorption. Credit allocation policies that favor large, well-established firms (particularly the chaebol, a Korean version of the earlier Japanese zaibatsu) also promote the increases in scale that reduce absorption. In mining and manufacturing, for example, the employment share of establishments employing 500 workers or more rose from 33 percent in 1969 to 42 percent in 1980. Output per worker in 1980 was more than twice as high in these establishments as in ones employing 10-19 workers.<sup>30</sup> Overvaluation of the won reduces import prices relative to domestic prices and encourages substitution of imported capital equipment for domestic labor. Domestic prices in

Korea rose much more rapidly during the 1970s than prices in the US and Japan (Korea's main trading partners), yet the won- US dollar exchange rate remained unchanged from the end of 1974 to early 1980. Subsequent devaluation and the recent interest in encouraging previously neglected small and medium enterprise should favor absorption though the absorptive effects of such policies were surely incidental to their adoption.

Wages, working conditions, and availability of sufficient work are significant aspects of working life as well as absorption or the basic situation of employment or unemployment. Regularly published wage data, available only for regular mining and manufacturing employees, show that nominal wages doubled from 1970 to 1974, tripled from 1974 to 1978, then doubled again by 1981-1982. Adjustment for changes in the cost of living, as determined by total expenditure of the average urban wage and salary-earner's household, yields a wage equivalent to half the cost of living in the early 1970s that rises to 73 percent in 1977-78 before falling back to 69 percent in 1979-82. Published wage statistics are probably too low during the last few years because employers, pressed by the government to restrict wages, are reputed to have offset smaller increases by expanding fringe benefits and payments in kind. Also, the monthly manufacturing wage average, \$273 in 1982, applies only to regular workers and hides wide variation among industries, by sex, and by employment status. Large numbers of temporary and daily workers, women, and apparel workers earn much less. Whether low wages are a source of contention or public disturbance is probably less a matter of real buying power or its decrease than of workers' perceptions of decline in their relative economic status. The Fifth Plan shows an increase in income inequality between 1965 and 1980, while a study of poverty during the mid-1970s reveals that poverty had become more of an urban than a rural problem, and the the urban poor were mainly full-time daily and temporary workers rather than the unemployed.<sup>31</sup> We do not know, however, whether these

workers have lost ground or simply moved from rural to urban poverty and, if they have dropped in the distribution, whether they are aware of the fact or not.

Labor-force surveys show a continuous decline since the mid-1960s in the proportion of workers working fewer than 18 hours a week. This might mean that more full-time work is available for those who want it, but since the decline is concentrated in agriculture among male-family workers, it is probable that farm youths are spending more time in school and less in the fields. The long-term increase in the average workweek might also indicate an increase in the availability of work, but this may simply result from institutional or structural changes and is offset in the last few years by a rise in the proportion of workers working below-average workweeks. While the available indicators are contradictory, we know that output growth has been below average since 1979, so it is likely that demand has been slack and that many workers cannot find full-time employment.

The availability of full-time jobs is perhaps the most visible sign of sufficient labor absorption, but the match between supply and demand for particular jobs is also significant. The current plan to expand the electronics, machinery, and other "skill-intensive" industries should increase the demand for well educated, skilled workers. Rapid growth in the numbers of workers who have completed secondary-level education has already raised skill levels, as should the doubling of college entrances in 1981 and afterward. This doubling, incidentally, will give Korea an educational profile more like that of the advanced industrial economies than that of other, middle income economies. Since the Ministry of Education controls course offerings to suit the technical and high-level manpower requirements of the economic development plans, and the demand for education has always exceeded the supply, there should be a

reasonably good match between supply and demand for particular skills.

Generalization about working conditions is difficult because information is scattered or nonexistent and there are too many parameters to evaluate and weigh in the generalization. Workers have complained of dust, noise, excessive temperatures and poor ventilation, but poor working conditions may not be a general problem. Long working hours are prevalent, welfare facilities such as dining halls, dispensaries, and bath houses on industrial sites (many workers are young women who live in employer-provided dormitories at the industrial sites) are sometimes inadequate, and women's pay is particularly low. In 1980, for instance, a survey of living conditions among female workers at two industrial sites, Kuro and Kumi, showed that wages of women working in textile plants, even with maximum bonuses added, were significantly below figures released by the Ministry of Labor for regular textile employees.<sup>32</sup> Sex discrimination and working conditions that violate the Labor Standards Act are hardly surprising, however, given the impotence of labor unions.<sup>33</sup>

A set of laws enacted thirty years ago covering labor standards, unions, disputes, and labor committees governs labor-management relations. Though an amendment banning strikes in 1971 was repealed in December 1981, new provisions adopted in 1981 serve to limit strikes because they restrict union shop contracts (they can be negotiated only with management's consent), limit collective bargaining to the enterprise level, and prohibit union locals from accepting outside help. All enterprises must have a labor-management council to deal with day-to-day issues, while there is an elaborate labor-committee structure (central committee members are appointed by the President, local committee members by provincial governors or large-city mayors) to settle disputes. Since the Federation of Korean Trade Unions, the national organization, ". . . became closely associated with the government party in 1952 . . ." and the recent labor-law

amendments have curbed unions' organizing and representation functions, labor-management relations have favored management and unions had organized only 23 percent of organizable workers by 1979, after which membership declined in both absolute and relative terms.<sup>34</sup>

Low wages, long working hours, or poor working conditions cannot be wholly attributed to ineffectual labor organization. While rapid output growth has raised employment from 8 million in 1963 to a possible 15 million this year, the increase has not been sufficient to eliminate unemployment or create labor shortages. Absorption has been limited by rapid productivity increase and by declining labor intensity, particularly as changes in industrial structure have favored more capital intensive activities and those with above-average productivity growth. Significant increases in real wages or quantum improvements in working conditions are unlikely to occur before absorption has reached the point where labor is in short supply and this is unlikely to happen before the pace of growth rises and the number of new entrants begins to fall in the late 1980s. Though toothless unions may pose no threat to economic or political stability, the same cannot be said of inflationary expectations, particularly since the sharp drop in price-increase rates since 1980 has been achieved by wage-price controls that have frozen real wages at 1979 levels. As the current upturn continues, growing skill shortages should raise wages of workers in greatest demand, increase pirating of skilled workers, and push up already high labor-turnover rates. The combination of increased demand for labor and upward pressure on prices should also make wage negotiations more difficult and labor peace less assured because the increase in demand reduces the threat of job loss while price increases are likely to generate more demands for higher wages.<sup>35</sup>

#### IV. The Government and the Economy<sup>36</sup>

The influence of the political leadership ("regime", here) on Korea's or any other country's economic development should depend on the size of the public sector, the capacity of the regime to implement policy, the priority attached to economic goals, the ease or difficulty of governing, and so forth. These are all difficult to specify and depend, in turn, on such disparate factors as Korea's geopolitical position and the Confucian ethic as well as on the regime's characteristics and economic institutions which, in Korea's case, are mainly the market mechanism and private property rights rather than central planning and state ownership. Economic response to regime stimulus is likely to differ among countries or between regimes in the same country because of these intervening factors. We know, for example, that a change in required bank reserves alters the money supply and eventually affects prices. We know little about the size and speed of response, however, because these depend among other things upon how the bureaucracy responds to political directives. It is hardly surprising, therefore, given the complexity of relationships and the obvious influence of institutional and cultural factors, that economists treat "government" as exogenous and that neither economists nor political scientists have a paradigm that can satisfactorily explain how the regime or government influences economic development.

One factor that ought to determine the impact of government actions on the economy is the relative size of the public sector, on the grounds that the larger a public sector's share of the economic activity the more ways the regime can affect the economy.<sup>37</sup> Possible measures of the size or relative importance of the public sector include the government's share in total expenditures (budget ÷ GNP), the proportion of gross domestic product that originates in the public sector, or the revenue ratio (government

revenues ÷ GNP), the government's share of total claims on resources. In 1980, for instance, the revenue ratio was 22 percent and the government's share of total expenditures (public consumption plus public investment) was 20 percent. There are no meaningful statistics on the proportion of GDP originating in the public sector. Any of these measures is misleading, however, because they understate the size of Korea's public sector. One reason is that accounts of public and quasi-public enterprises such as the tobacco monopoly and the Korea Electric Power Company are included with the private sector not, as is the practice elsewhere, with the public sector. Also, American military assistance to Korea is omitted from government budgets, the national accounts, and balance-of-payments statements. Published won defense expenditure accounted for 30 percent of central government budget outlays in 1980 or 6-7 percent of GNP. US military assistance, though substantial in the past (\$7.3 billion from 1953 to 1978) has been equivalent to only 5 percent of budgeted defense expenditures in the last few years.

If it is impossible to calculate the size of Korea's public sector, or compare it with public sectors of other middle income countries, something can be said of the pattern of the government's economic activities and of trends in revenues and expenditures. Infrastructure requirements during early stages of development typically generate heavy government investment, while demand for social expenditures increases government consumption at later stages. Government investment does not decline as a proportion of GNP in Korea, however, while government consumption remained a fairly steady 8-10 percent of GNP since 1953 before rising to 11-12 percent in the early 1980s. Revenues, in turn, typically rise more than proportionally with GNP as an economy develops. Growth of per capita income accounts only for absolute increase; the additional, relative increase is associated with other concomitants of development that increase tax capacity, such as growing monetization and expansion of foreign

trade.<sup>38</sup> Korea's experience has been typical as revenue ratios increased from 14-16 percent during the early 1960s to 20-22 percent in 1979-81. The increase can be attributed partly to supply-side factors like monetization and reform of tax administration (since 1964), and partly to demand-side considerations like the high income elasticity of demand for education and other publically-provided services.

Though revenue ratios and public-expenditure shares tend to rise with per capita income, they differ markedly among countries with the same per capita income. This suggests that the government's share in the economy is influenced by political preferences as well as by demand considerations or by the government's revenue-raising capacity. The increase in expenditures (and therefore revenues) has been limited in Korea both by historical accident and by political preference. The country inherited a swollen bureaucracy and defense establishment at the end of the Korean War which needed little expansion as the economy grew. Also, there has been a continued "production-first" philosophy which, like Japan's, has directed resources to increasing output rather than to social ends. This can be seen in Korea's recent government budgets, in which less than ten percent of total outlays have been allocated to social-expenditure categories such as social security, welfare, housing, and community services.

What is unexpected in Korea is the large role of public enterprise in an otherwise free-enterprise economy. Jones and Sakong show that in 1972, for instance, public enterprises produced two-thirds of the country's electric, gas, and water supplies, 30 percent of transport and communications services, 15 percent of manufacturing and 30 percent of mining output, and an unusual 80-90 percent of financial services.<sup>39</sup> While many public enterprises originated in Japanese concerns whose ownership was vested in the government after liberation, public-enterprise production is important (2 percent of domestic product,



11 percent of non-agricultural domestic product in 1977) ~~less~~ because of inheritance than because of continued growth in enterprise output during recent decades. This growth probably reflects increased demand for the sorts of goods and services suited to public production, a cost-efficient enterprise record rather than a history of drain on the public fisc as in many developing countries, and a pragmatic rather than an ideological approach to issues of public versus private ownership.<sup>40</sup>

The Korean government may influence the economy more in other ways than by its fiscal activity or direct production since the private sector accounts for roughly three quarters of national output and expenditure. Whether a government is active in economic affairs or not should depend on the priority accorded to economic goals, the regime's ability to control the bureaucracy, the ease or difficulty of governing the country, and possibly the earlier success achieved by assuming an active role. In each case the situation in Korea permits the government to exert great influence in economic matters, which perhaps explains why both the Park and Chun regimes have played an active, even interventionist role in the economy.

One possible reason for the economic activism of Korean governments is that they have been led since the early 1960s by authoritarian regimes, perhaps best described as military, bureaucratic-authoritarian regimes. They are "bureaucratic" because the military rules more as an institution than through the personal rule of a military strong man, "authoritarian" because obedience to government dictates is required of individuals.<sup>41</sup> There is no reason, however, why authoritarian regimes should be more active in economic affairs than democratic regimes except, perhaps, that without the same need for prior consultation and widespread agreement, they can act faster than their democratic counterparts. Rather, the activism of Korea's authoritarian regimes has probably resulted from their success, not their authoritarianism,

because successful action should foster further action, whereas unsuccessful action would not. Another logical possibility, that authoritarian governments are successful because they are authoritarian, is contradicted by evidence that there is no correlation between economic success and type of regime, though countries with ". . . authoritarian forms of government [tend to] perform either very well or very poorly".<sup>42</sup>

Beside success as a possible cause of activism, action is promoted by the factors that ease the tasks of government in Korea. One of these is the hierarchic and authoritarian Confucian tradition of family and political relationships. Though the Park and Chun regimes may not have received the Mandate of Heaven, they have had at least the tacit support of the population. Consistent with this tradition has been a history of highly centralized government; regions and localities have never had much autonomy and do not now. Also, population, geography, and economic size are all favorable. Korea's land area (98 thousand square kilometers) is compact, unlike that of Indonesia and the Philippines, while its smaller population (39 million) is easier to administer than the enormous populations of countries like India and China. Market size (population times per capita income, now about \$ US 60 billion) is large enough to permit economies of scale. Though it may not be sufficient to support adequately a domestic auto industry, it is large enough to permit a much wider range of specialization than can be attained in small markets like Singapore's or Hong Kong's. Also, the population is unusually homogeneous. There are therefore no linguistic or ethnic minorities with separatist tendencies or demands for special treatment. Furthermore, the threat of attack from the north has had a powerful unifying effect. While this threat is sometimes used by the regime in a cynical fashion to stifle dissent, it also provides a sense of national economic purpose since economic strength is seen as a defense prerequisite. Finally, little evidence exists to indicate the social malaise

associated with wide income disparities and multi-generational poverty. In fact, inequality of income distribution is unusually low and there seems to be a fairly high degree of social and economic mobility.<sup>43</sup>

Another reason for the government's active role in the economy, besides success with activism and the ease of governing, has been effective administration. It is effective because the state apparatus can be used to transmit and enforce the regime's policy directives either by compulsion or by administrative discretion. Myrdal has characterized the "soft states" of South Asia as ones where ". . . policies decided on are often not enforced" and where "the authorities . . . are reluctant to place obligations on people".<sup>44</sup> A "hard state", though not defined by Myrdal, can be specified by contrast. It is one that is ready to place obligations on people and to enforce them if necessary. Korea is definitely a "hard state" in that the regime has been effective in obtaining compliance with government directives, either by direct command or by discretionary controls. The efficacy of direct command under an authoritarian regime is self evident, but the success of discretionary controls deserves mention. Such controls work well in Korea because the leadership's commitment to economic development is passed down through the hierarchical command structure to the lowest administrative levels so that no official can afford to act in ways that obstruct development.<sup>45</sup> Both types of control are widely used in Korea because the government has not hesitated to intervene in the economy, and because the approach to policy implementation has been highly pragmatic. If one type of intervention proves ineffective, another is tried.

A final reason for the government's economic activism has been the high priority attached to economic goals. Insofar as media coverage reflects public priorities, then the unusual emphasis by the media on economic matters can be taken as evidence in point. The overall economic goal, typically the

improvement of living standards for the population (i.e., mass welfare), is only one of several major regime goals in most countries, and Korea is no exception. Other possible goals such as the preservation of political power or the maintenance of national security are important too and may shape economic policies. These three are probably the major goals in Korea and are competitive as well as complementary, which explains why policies to achieve self sufficiency in food production or to foster heavy industry may appear irrational to economists but make perfect sense to policy makers.<sup>46</sup> Since the early 1960s, the economic goal has perhaps been emphasized more in Korea than in most other developing countries because the economic failures of the Rhee government made economic improvement the overriding national objective and because economic performance has been the main means of achieving legitimacy for new military regimes.

Evidence is plentiful that the Park and Chun regimes have played active roles in economic affairs. For example, the list of items eligible for import, the terms of export financing, and tax-rate maxima are often changed. Beside the usual repertoire of monetary, fiscal, and commercial policy instruments, Korean governments have used other means to achieve economic ends, including direct market intervention. After the second oil shock and disastrous harvest of 1980, for instance, the Chun regime used wage and price controls to curb inflation; both the Park and Chun regimes have employed a "two-price" policy to increase farmers' incomes and reduce urban rice costs. Of particular interest, however, are planning, and credit allocation. Planning, perhaps the leading symbol of government intervention, is of interest because the function of planning is controversial in Korea. Credit allocation, in turn, is noteworthy because it is the major single instrument of government control.

The possible relation of planning to Korea's economic success has inspired a literature that, at one extreme, comes close to attributing

accelerated growth to planning and, at the other, to viewing the plans mainly as a means for improving market functions. The plans themselves, which date back to the Rhee regime, have not always been adopted and vary widely according to the econometric sophistication with which they are constructed. Planning is probably more prescriptive than in Japan, for example, because the government tends to intervene more in the economy than Japan's, and because it has more power to allocate credit. Still, there is a large, market-oriented private sector that is not bound by the plans. Also, since actual growth has typically been well above plan targets the plan itself, despite annual adjustments, tends to become increasingly irrelevant with time. In addition, the plans do not specify the means or policies that will be needed to reach plan targets, and it is evident that some targets are included without providing the means to achieve them, possibly because the planners must cater to political as well as economic imperatives.<sup>47</sup> Given such limitations, it is possible to adopt a minimalist position in assessing the function of Korea's plans. They serve to sustain market functions by reducing risk and uncertainty, minimizing information costs, and generating an expansionary psychology.<sup>48</sup> If plans do more than this, that is, if they have a role independent of improving market functions, then it may be to establish priorities and to insure that public-sector activities are feasible and coordinated. To assert, however, that ". . . public sector policies derived from the planning function were indispensable to the economic growth of the last 10-15 years [before 1977] . . ." is to overstate the case.<sup>49</sup> Since other developing countries have employed planning without achieving Korea's economic success, what may be significant in Korea is not planning itself but the combination of planning and sophisticated policy implementation.<sup>50</sup>

Credit allocation and control of access to foreign exchange are perhaps the main means of achieving the government's economic goals in Korea. The

typical enterprise is highly leveraged and therefore especially vulnerable to reduction or withdrawal of credit. Loanable funds are scarce and lending rates are limited by statute so that the organized money market (i.e., the banking system) cannot fully satisfy credit requirements. The government directs and supervises special purpose banks, such as the Korea Exchange Bank or the National Agricultural Cooperatives Federation, and controls commercial banks both through the Monetary Board, which supervises commercial bank activities, and until recently, through stock ownership since it was the major shareholder in four of the five nationwide commercial banks. Access to foreign credit is also controlled because foreign loans are guaranteed by the Exchange Bank. The unorganized money market (curb market) is the one credit source not controlled by the government.<sup>51</sup> Excess demand for credit can usually be satisfied in the curb market, but only at a cost of roughly three to six times going rates at banks. Since the government probably controls three-quarters to four-fifths of the supply and excess demand requires rationing, it is not surprising that credit is allocated in ways that are consistent with the government's economic goals to firms that promise to perform satisfactorily.<sup>52</sup> In recent years allocation has favored export activity, heavy and chemical industry projects, and the chaebol, or large conglomerate enterprises.

The government's activity or inactivity in economic affairs is mainly significant in combination with the appropriateness of its economic policies. The Rhee regime, for instance, adopted the same import-substitution strategy employed by most developing countries after achieving independence to establish a domestic industrial base. This strategy marks what Cohen and Ranis have termed the "first postwar restructuring."<sup>53</sup> By the late 1950s, after the initial easy phase was completed and a second more capital intensive, hence less appropriate phase had begun, growth slowed and the economy was mired in

inflation, the overvalued exchange rates used to maximize American aid, import restrictions, heavy trade deficits, unrealistically low bank interest rates, and inadequate tax collection. Korea, in short, displayed the hallmarks of inept policy and weak implementation found in many developing countries. The regime, concerned mainly with political survival, was fortunately incapable of pursuing an active role in economic matters.

The situation reversed by the mid-1960s when economic strategy shifted under the new Park government from emphasis on import substitution to promotion of exports. This shift occurred elsewhere as well as in Korea and was marked by devaluation, import liberalization, relaxation of economic controls, and the other features of Cohen and Ranis' "second restructuring". The new strategy encouraged producers to profit from expanding output rather than from avoiding controls as they had done during the import-substitution era, unleashed Korea's comparative advantage in labor-intensive manufactures, and was a major cause of the acceleration in the pace of development that occurred at the time. In this case the economy benefitted from the combination of activism and appropriate economic strategy.

The regime retreated from the more liberal policies of the second restructuring after the early 1970s in response to a series of crises, including the one-third reduction by the Nixon administration in the number of US troops stationed in Korea, growing protectionism after the breakdown of the fixed-exchange rate system, and import inflation with the commodity boom of 1972-73 and the first oil shock of 1973-74. The government responded to these crises by accelerating the development of heavy industry with military potential and increasing domestic food grains production, both import substitution measures, and by diversifying trade, mainly by encouraging construction activity in the Middle East. These measures proved inflationary because investment in heavy industry was financed by expanding the money supply and by diverting funds from

light industry, which caused consumer-goods shortages and further inflation. Agricultural output was expanded by price supports that were financed through overdrafts with the central bank, another source of inflation, while the increased overseas construction activity contributed to skill shortages and wage inflation. Inflation was fought by price controls rather than by devaluation and import liberalization so that an overvalued won and rising wage costs began to erode export competitiveness. The retreat was halted in early 1979 when an essentially liberal stabilization program was adopted, but this program was overwhelmed by the second oil shock and by President Park's assassination and the political turmoil that followed.

The stabilization program was reinstated and the final version of Korea's Fifth Five-Year Plan was released in 1981. An undated EPB plan summary at the time noted that the "major strategy adopted . . . is to change the overall management of the economy from one that makes extensive use of government controls to one which relies heavily on the operation of the market mechanism". President Chun later announced in his January 1982 state-of-the-nation address that "institutional reforms will be continued to strengthen the functioning of the market mechanism". Since then, the government has sold its equity in commercial banks, eased import restrictions, and moved to lower agricultural price supports. The evidence suggests that in adopting a more market-oriented strategy, the Chun regime is now in the early stages of what Cohen and Ranis might call a "third restructuring".

Though it is tempting to conclude that the third restructuring marks the end of the government's active role in economic affairs, and that the economy is going to be directed by Adam Smith's invisible hand from now on rather than by bureaucrats, this conclusion would be premature. Credit allocation is still tightly controlled though the commercial banks are now in private hands, import restrictions and agricultural price supports still exist though they may have



eased. The government's less active economic role is still quite active by international standards. Also, though the Korean economy has entered a new phase marked by less government intervention and greater reliance on the market mechanism, such changes have occurred before. The pattern of strategy change is cyclical rather than linear so that what is happening now may be reversed tomorrow.

What will happen tomorrow is likely to be determined by a long-term struggle within economic policy circles between two groups that have been termed the "liberalizers" and the "traditionalists". The liberalizers favor more laissez-faire, market oriented policy alternatives while the traditionalists favor continuation of government controls on the grounds that they have been associated with past success and therefore should continue to prove successful. Since the current ascendancy of the liberalizers results from the failures of traditional, activist policies in the late 1970s, it is likely to continue until present policies fail, after which the traditionalists are likely to gain influence once more. Current policies have succeeded in reducing inflation and the economy is now in the early stages of recovery from the 1980-82 recession, so there are no signs of imminent economic failure. There is therefore no reason to assume that the traditionalists will regain influence in the near future or that the government is soon likely to reverse its current strategy and resume a more active role in the economy. Current strategy, however, is still more interventionist than that in most other developing countries.

## V. Exports and Development Strategy

Korea, along with Taiwan, Singapore and Hong Kong, is one of the so-called "gang of four" East Asian economies whose speed and quality of growth distinguishes them from the rest of the developing world.<sup>54</sup> In each case growth has been export-led growth in that the most rapid expansion centered in the industrial sector and, within the industrial sector, in output for export. The juxtaposition of exceedingly high GNP growth rates and even higher export growth raises questions of why exports have grown so fast in Korea, how export expansion has contributed to growth, and what future growth rates are likely to be in the wake of global recession and the stagnation of world exports in 1979-82. Such questions are quantitatively significant in a country like Korea because exports now account for 40 percent of gross national product (1982) and possibly 25 percent or more of value added.<sup>55</sup>

Exports were insignificant before the mid-1960s and less than \$ US 200 million in 1965. Access to American aid damped any incentive to export and total and per capita output were low. Exports quadrupled from 1965 to 1970, tripled from 1970 to 1973, doubled from 1973 to 1977, and increased another 50 percent to \$ 21 billion in 1981. One reason for this sharp growth was the switch in the government's strategy emphasis from import substitution to export promotion in the mid-1960s when it became clear that further import substitution would be difficult, US economic assistance would be phased out, and that exports would have to be expanded to earn the foreign exchange needed to pay for imports formerly obtained on concessional terms. Exporting was encouraged by a financial stabilization program launched in 1963 to halt Korea's chronic inflation. Major elements of the program were revenue and expenditure measures designed to end deficits and to achieve fiscal balance, and credit restrictions and an interest-rate reform employed to promote domestic saving.

Devaluation, import liberalization, and government repayment guarantees to foreign lenders were other elements of the program with more direct impact on exports.<sup>56</sup> A broader goal of the American advisors who were pushing the reform was to eliminate many of the controls that had hobbled the economy so that entrepreneurs might profit from output expansion rather than from avoiding controls.

A number of direct measures have also been used to promote exports. These include tax exemption, an import link system that permits exporters to obtain otherwise prohibited imports for incorporation in exports or domestic sale, and import licensing so that only firms meeting some export minimum are allowed to import. Also employed have been direct subsidies in the form of exchange premia on export earnings, discounts on railway and electric costs, and generous access to low-cost credit. In addition, export has been encouraged by "leakage" because standard breakage allowances for the transformation of imported materials into exports have been sufficiently generous so that exporters could profit from selling export goods at high prices in the domestic market.<sup>57</sup>

These measures, beside displaying the considerable ingenuity of their authors, are intended to alter the incentives facing entrepreneurs so that they will find exporting is as profitable or more profitable than substituting for imports. Profitability depends not only on export subsidies but on the extent to which producers for the domestic market are protected by tariffs and by other barriers that make import-substitution more profitable. Estimates of effective protection and subsidy rates for manufacturers, who produce most of Korea's exports, indicate that in 1978 export sales on average received slightly greater subsidies than domestic sales. However, these estimates cannot incorporate all of the benefits of exporting, particularly easy access to low-cost credit, the major promotion device.<sup>58</sup>

Export sales may therefore have been subsidized much more than domestic sales.

Export production is undoubtedly promoted by subsidies but subsidies have probably been too small, even allowing for downward bias in the estimates, to account for Korea's phenomenal export growth. Another possible reason for phenomenal growth was the above-average increase in worldwide income after 1960, and the typically high income elasticity of demand for imports. The index of world trade among market economies doubled from 1965 to 1973 before oil shocks inspired the deflationary policies that slowed income growth and halted the increase in world trade in later years.<sup>59</sup>

Demand explanations are insufficient to explain Korea's export performance, however. When world trade volume rose another 30 percent from 1973 to 1982, Korea's exports more than tripled. Such above-average growth is more likely to result from supply than from demand factors and, in particular, from the exploitation of previously unrealized comparative advantage.

The standard comparative-advantage argument is that no matter how inefficient or backward a country may be, when each country's tradeable goods and services are ordered by cost per unit and the rank orders are compared, there will be sufficient variation in ranks to generate trade where each country benefits from exporting relatively low-cost and importing relatively high-cost goods and services. Terms of the exchange will be better (i.e., resource costs will be less) than the terms that would prevail if both sets of goods or services had to be produced domestically. There are also the usual caveats that trade is limited by transport costs, and possibly inter-country differences in tastes, but of more interest here is the typical assumption that relative costs reflect factor endowments, and the Heckscher-Ohlin strong-factor-intensity hypothesis that what is produced by relatively labor-intensive, capital-intensive, or natural-resource intensive means in one country is produced in the same way elsewhere.

The assumption that relative factor costs reflect factor endowments requires markets that are less fettered by government intervention, labor-union restrictions, or monopolistic pricing than are found in most countries including Korea. Still, it suggests that when exports jumped in the mid-1960s Korea, then the epitome of a labor-surplus economy, would export labor-intensive products in exchange for capital-intensive or natural-resource ones. The possibility of reversals, or that Korea's labor-intensive exports might be produced at lower cost elsewhere by capital-intensive means, is ruled out by the Heckscher-Ohlin hypothesis.<sup>60</sup> The hypothesis, incidentally, only requires similar ordering of industries by factor intensity; all production can be more labor intensive in Korea than in capital-abundant countries like the United States.

The composition of Korea's commodity exports and imports in 1965 and 1981 is shown in Table 4 (next page). Beside the enormous increase in values ----- insert Table 4 here

from 1965 to 1981, this table shows. . . in a crude way . . . that exports were dominated in 1965 by a combination of foods (mainly fish), crude materials (such as raw silk, tungsten ores), and light manufactures like textiles and apparel. Imports, in contrast, were even more heavily weighted by crude materials (mainly textile fibres) and by chemicals, machinery, and other heavy manufactures. By 1981, the export share of apparel had increased, as had the import share of fuels, but the main development was the expansion of machinery, transport equipment, and other heavy industry products in both export and import totals. In sum, the table shows the import bill of a typically resource-poor developing country that has had to spend much more on oil after the oil shocks than before, but has still been able to increase the import share of the non-electric machinery (i.e. capital equipment) needed

Table 4. Korea's Commodity Trade, 1965 and 1981

units: \$ millions

SITC Code	<u>Exports</u>		<u>Imports</u>	
	<u>1965</u>	<u>1981</u>	<u>1965</u>	<u>1981</u>
0,1 Food, Beverages, Tobacco	29.1	1,442	63.7	2,787
2 Crude Materials	37.0	284	110.0	3,630
3,4 Fuels, Oils, Fats	1.9	174	35.1	7,902
5 Chemicals	0.4	682	103.4	2,109
5 Mftrs, classified by Materials	66.4	7,215	71.2	2,775
(65) (Textiles)	(26.3)	(2,450)	(26.9)	(494)
7 Machinery, Transport Eq.	5.5	4,712	73.1	5,999
(71) (Non-Electric Mach.)	(2.5)	(486)	(35.7)	(2,528)
8 Miscellaneous	34.5	6,638	6.8	787
(84) (Apparel)	<u>(20.7)</u>	<u>(3,863)</u>	<u>(0.5)</u>	<u>(10)</u>
Total <sup>1</sup>	174.8	21,254	463.3	26,131

1. Also includes SITC 9, not elsewhere classified

Source: Bank of Korea, Economic Statistics Yearbooks.

to expand its industrial base. The rise in the export share of heavy manufactures, in turn, suggests a possible shift in comparative advantage from more labor-intensive to more capital-intensive products.

Abundant and therefore cheap labor may have been the key to much of Korea's export growth in the 1960s and afterward, but labor had to be organized efficiently if local firms were to participate in international markets, and this raises questions of what determines the supply of entrepreneurship and how this supply expanded as output soared. We know little about sources of entrepreneurship, but the little we know suggests that most of the increase in manufacturing output comes from increasing size rather than from increasing numbers of firms so that the supply question is one of quality rather than quantity.<sup>61</sup> A combination of cheap labor and good entrepreneurship was probably behind the rapid growth of textiles, plywood, apparel, and other labor-intensive manufactures. Korean wages were less than a third of Japanese wages in these industries, for example, value added per worker ( productivity) was more than a third as high, so Korean wage costs were lower. As wages and productivity rose from 1970 to 1977 in both countries, Korea's wage-cost advantage increased. As it increased, Japan's share in world export markets for these products fell, Korea's share rose.<sup>62</sup>

Comparative advantage should shift over time as factor endowments increase unevenly. The decline in Japan's world market share of certain labor-intensive products points to this as does the rise shown in Table 4 in the share of machinery and transport equipment in Korea's export totals. One possible reason for a shift in Korea's comparative advantage is that heavy investment in education and in plant and equipment since the mid-1960s has expanded its capital stock more than its labor stock.<sup>63</sup> Another possible reason is that just as labor-intensive exports from Korea, Taiwan, and other low-wage, newly

industrialized countries eroded Japan's comparative advantage in such exports, growing competition from China, the Philippines, and other even lower-wage countries has had the same effect on Korea's more labor-intensive exports in recent years. Though the expansion of capital-intensive exports follows the Park' regime's push to expand the heavy and chemical industries during the late 1970s, and this push was motivated mainly by strategic considerations, it was also a response to increasing export competition from below.

Evidence that comparative advantage has actually been shifting in Korea is given in Table 5 (next page), where Korea's exports in 1971 and 1981 are ----- insert Table 5 here

grouped according to whether they are products of particularly labor-intensive or capital-intensive industries.<sup>64</sup> Almost half of Korea's exports were still highly-labor intensive exports in 1981, but their share had declined sharply after 1971 while the small share of highly capital-intensive exports doubled. These new capital-intensive exports are typically products that are already being produced for domestic sale. Though there are notable exceptions, such as the offshore assembly of electronic components for American firms, previous production experience is usually needed to reduce costs and raise quality to world market levels. Also, production for domestic markets often substitutes for earlier imports. Akamatsu found that the sequence beginning with imports, then import substitution to supply domestic markets and, finally, output for export, described Japan's industrial development.<sup>65</sup> Akamatsu's "Wild-Geese Flying" pattern of growth also fits much of Korea's industrial development, so that what is exported is explained in part by prior import substitution as well as by changes in comparative advantage.

Though it has been difficult to specify the appropriate relationship, international comparison of export performance and the pace of development



Table 5. Changing Export Structure and Factor-Endowment Categories

	<u>1971</u>		<u>1981</u>	
	<u>\$ million</u>	<u>%</u>	<u>\$ million</u>	<u>%</u>
L - industries <sup>1</sup>	609.6	71.1	8,213.2	45.7
H - industries <sup>2</sup>	27.5	3.2	1,140.1	6.3
All NNRB Commodities <sup>3</sup>	856.9	100.0	17,962.2	100.0

NOTE: L-industries or labor-intensive industries are those with particularly low value-added per worker, whereas H-industries or capital-intensive industries are those with especially high value-added per worker.

1. Includes leather products (SITC 61), wood products (631 + 632), textiles (65) travel goods (83), apparel (84), and footwear (851).
2. Includes drugs (541), synthetics (581), non-electric machinery (71), motor vehicles (732), and instruments (86).
3. Non-natural resource based (NNRB) products (SITC 5, 6, 7, and 8, less basic chemicals [51 and 52], fertilizers [561], paper [64], non-metallic minerals [66-667], and non-ferrous metals [68]). The total also includes exports of intermediate industries, or those which are neither very labor intensive or capital intensive.

Source: as in Table 4.

reveals a significant, positive relation between the two for "richer" LDCs.<sup>66</sup> One reason is that concentration on output for exports, according to the comparative-advantage theorem, makes for particularly efficient factor use. Exchanging the labor embodied in Korea's labor-intensive manufactures for imported rice, for instance, is a much more efficient use of the labor than using the same labor to grow rice in Korea. Other reasons, examined by Blumethal, include a direct effect of export growth on output growth since value added in output for export is a part of GDP and GNP, and two indirect effects. Exports may influence growth indirectly if there are strong linkages between export and non-export industries. Also exports, as a source of foreign exchange, may affect growth through imports.<sup>67</sup> Keesing has argued that "outward looking" or export promotion policies are preferable to "inward looking" or import substitution policies because export production generates greater learning effects and therefore improves human resources more, creates closer ties with more advanced economies and thus encourages competition, and overcomes the limitations of small domestic markets through the economies of scale possible in producing for world markets.<sup>68</sup> Blumenthal's last point is of particular interest because the import-increasing effect of export expansion has been an important element in Korea's high-growth strategy.

Export expansion has been the main theme of Korean economic policy, with an occasional lapse, since the mid-1960s. This is because export expansion is the key to a growth strategy in which GNP growth is maximized by maximizing the growth of investment. World Bank estimates show that Korea has been successful in this. Investment increased more rapidly in Korea from 1960 to 1970 than in any other of the 63 middle-income countries in its reference group, and faster from 1970 to 1980 than in all but a few oil-exporting countries. In the process, the share of investment in total expenditures, or the investment ratio, rose from less than 15 percent in the early 1960s to

over 30 percent in recent years, again well above the reference-group average. The investment, in turn, has been used to expand productive capacity and therefore output. Capital-output ratios are low or, alternatively, output expansion per unit of investment has been high, because Korea benefits from particularly low construction costs and because relatively little investment has gone for infrastructure, which tends to be highly capital using. Also, the investment share of housing, which does not contribute to capacity expansion, is even lower in Korea than in Japan, where the inadequacy of the housing stock is well known.

Exports are related to investment because investment has been partly financed by foreign borrowing (saving). Though the five-year plans always reflect government attempts to raise domestic and reduce foreign saving, foreign saving has financed a wildly fluctuating though usually significant share of investment in recent years.<sup>69</sup> By the end of last year this foreign saving plus debt service had cumulated to a foreign debt of around \$ 37 billion. Exports generate the foreign exchange needed to service and amortise the foreign debt. Export expansion, in turn, encourages foreign lenders to continue to extend loans to Korean firms since expansion promises to provide the additional foreign exchange that will be needed to handle future obligations. This role of exports in Korea's high-growth strategy is circular and self-perpetuating: the economy grows because exports expand and exports expand because the economy grows. What happens to economic growth, then, when exports do not expand? Evidence for the short run is mixed. When real exports fell in 1974 and 1979, GNP rose from 1974 to 1975 but not from 1979 to 1980. In the long run, however, lower exports or export stagnation should limit investment and therefore reduce growth.

Worldwide recession has slowed Korea's export expansion recently. Real exports of goods and services rose only 5 percent in 1982, while nominal

exports during the first half of 1983 were slightly below levels for the first half of 1982. The short-term outlook is bleak. Despite current signs of recovery in the United States and other major importing countries, exports should grow little until excess inventories of imports are reduced. Longer-term prospects are much better. Korea's export and GNP growth rates should increase as demand elsewhere recovers from world recession, though the possibility of a third oil shock and consequent recession cannot be ruled out after the experience of the past decade. Another demand element is restriction against Korean exports. Restrictions may be relaxed as unemployment falls during the recovery. Korea's export expansion, particularly expansion of labor-intensive exports, has been limited by tariffs and by other protectionist devices such as the Multi-Fibre Arrangement (MFA) quotas on textile imports and the "orderly marketing" arrangements that have limited United States footwear imports. On the other hand, the rise in protectionism during the recent years, particularly the increase in non-tariff barriers, may be irreversible.<sup>70</sup>

Major long-term elements on the supply side are wage costs for more labor-intensive exports and the capacity of current industrial policies to expand the machinery, electronics, and other skill-or-human-capital intensive industries with export potential. The Chun regime's strong emphasis on price stability and recent devaluation of the won should increase the competitiveness of all exports. Continuation of present agricultural price-support policies and their associated import restrictions, however, will keep domestic food prices high, raise wage costs, and further erode the competitiveness of labor-intensive exports.

Industrial policy, outlined in the Fifth Plan, is designed to exploit Korea's growing comparative advantage in skill-intensive production. It is

to be implemented by investment in a set of national research projects to develop semi-conductor, bioengineering, and other technologies, liberalization of technology imports, establishment of industry research institutes, and upgrading of technology in small and medium firms. Recent expansion of university enrollments is another step that implements this industrial policy. These measures **suggest** that skill-intensive production requires greater access to proprietary technology than most current production, and a mastery of basic engineering and technology that has not been needed so far to export successfully. Whether Korean firms can obtain the proprietary technology they might need is a moot point. Their mastery of process or production engineering (recently demonstrated in the steel and shipbuilding industries) indicates, however, that they may also be able to master the different and possibly more demanding techniques needed to produce skill-intensive products.<sup>71</sup>

Recent defaults among international borrowers have raised the question of whether Korea, a major borrower, might also default. Any default would undo the high-growth strategy, since it is based on foreign borrowing, and upset the short-term financing needed to produce exports. Though Korea's external debt has risen sharply in recent years, the long-term debt-service ratio (long-term debt service ÷ exports of goods and services) is only around 15 percent. The government, following the advice of a recent IMF consultative mission, is now restricting access to short-term loans to reduce the short-term component of foreign debt. Whether the debt and its service burden continue to increase depends on oil import price movements, the pace of recovery in major export markets, and a host of other factors likely to affect Korea's balance of payments in coming years. A recent econometric study that incorporates these factors indicates that external debt will continue to increase, but that exports and GNP will rise faster so that the total (long plus short-term) debt-service ratio will fall through 1986. This finding, the current

measures to curb short-term borrowing, and a new Fifth Plan revision that calls for tightening monetary and fiscal policies to achieve earlier balance-of-payments equilibrium all indicate that default is unlikely.<sup>72</sup> Since default now appears unlikely, the drive to expand exports and, more generally, the commitment to pursue a high growth strategy should continue. To the extent that world market conditions permit and insofar as export producers can exploit shifts in Korea's comparative advantage, this drive should succeed.

## Footnotes

1. The value of Korea's experience as a model for other developing countries is examined in more detail elsewhere. See David I. Steinberg, "Developmental Lessons from the Korean Experience - A Review Article", Journal of Asian Studies, Vol. XLII No. 1 (November 1982), pp. 91-104; Tony Michell, "South Korea: Vision of the Future for Labor Surplus Economies?", in Manfred Bienefeld and Martin Godfrey, eds., The Struggle for Development: National Strategies in an International Context (New York: John Wiley, 1982), pp. 189-216.
2. World Bank, World Development Report, 1982, Appendix Tables 3, 19.
3. Non-food production is discounted here because it accounts for less than ten percent of agricultural output in Korea.
4. Government of the Republic of Korea, The Fifth Five-Year Economic and Social Development Plan, 1982-1986 (English Version), 1982, p. 55.
5. Sung Hwan Ban, Pal Yong Moon, and Dwight H. Perkins, Rural Development, Studies in the Modernization of the Republic of Korea: 1945-1975 (Cambridge, Mass.: Council on East Asian Studies, Harvard University, 1980), p. 87.
6. Government of the Republic of Korea, op. cit., p. 57.
7. See Ban, Moon and Perkins, op. cit., pp. 65-69. The authors discard the formal estimates because, among other reasons, "most agricultural technicians... agree that the rapid increase in availability of such key current inputs...has had a major impact on farm output..." (p. 68).
8. The government, incidentally, recently closed the Chungju fertilizer plant because of the "nation's excessive capacity for producing fertilizer." The Korea Herald, 26 July 1983.
9. U.S. Agency for International Development, Korean Agricultural Research: The Integration of Research and Extension, A. I. D. Project Impact Evaluation No. 27 (U.S. Agency for International Development: Washington, January 1982),

Summary, p. iv. See also David I. Steinberg, "Research and Extension: The Integration of Inquiry and Guidance" (Appendix G of this document).

10. This necessarily brief description overlooks the coercive aspects and problems of implementing the NCM. Vincent Brandt provides a more detailed, balanced, and skeptical assessment in Ban, Moon, and Perkins, op. cit., pp. 275-80.

11. Cereals (mainly rice and barley) are major components of consumer price indexes in Korea. In 1970, cereals accounted for 14 percent of the Seoul CPI and 18 percent of the All-Urban CPI.

12. Ban, Moon, and Perkins, op. cit., p. 250.

13. This migration was not mainly a consequence of direct farm migration to cities, but of a stepwise process in which many off-farm migrants remained in rural areas, and in which most migrants to the largest cities came from smaller cities and from rural non-farm backgrounds. Still, to the extent that migration is a push rather than a pull process, off-farm migration should spur urbanward migration. Though age, expectation, transferability of skills, and other factors affect migration as well as actual income differentials, these last appear important since surveys of migrant motivation in Korea show the primacy of economic considerations.

14. The estimates used here are from Ban, Moon, and Perkins, op. cit., p. 310, and from Hakchung Choo, "Widening Urban-Rural Income Differentials in Korea: A Re-Examination", Working Paper Series 82-05 (Seoul: Korea Development Institute, August 1982), p. 25.

15. Though the available crop data can be used to forecast production and to estimate future changes in the output mix, they are too unreliable for such use. One reason is that recent estimates are believed to be upward biased, a possibility consistent with the likelihood of attempts by lower - echelon officials to please their superiors by inflating results, and with evidence



that shows production (plus imports less exports less net increase in year-end stocks) to be inconsistent with and lower than consumption estimates.

16. Last year, for example, when the average wholesale price for rice was a little over one dollar (US) per kilo in Korea, the retail price was only \$0.71 in Taiwan. In 1980, when the Korean retail price was almost \$1.00 US, the import price was \$0.36. Similarly, when the import price of Australian beef was \$2.75 a kilo in 1980, the domestic (butchers') price was \$7.88. Food imports, through recently over \$2 billion a year, accounted for less than ten percent of total imports in 1980-82.

17. Farming income constitutes 70 percent of average farm-family income (1981) and only 10 percent of all farmers are "Class 2" farmers, or those whose agricultural income accounts for less than 50 percent of total family income. The same figures for Japan in the early 1980s were around 38 percent and 65 percent, respectively.

18. The Connel Rice and Sugar Company, after losing the bidding to Comet Rice, Inc. to sell rice to Korea under a US-Korean government agreement, has persuaded California rice-growing cooperatives not to supply Comet with the rice needed to fulfill the contract and, further, has evidently enlisted Congressional supporters to pressure the Koreans into breaking their contract with Comet in favor of Connell. See The Wall Street Journal, 7 July 1983, p. 22. Protests by Korean meat importers against a recently formed Australian meat cartel are reported in The Korea Herald, 14 July 1983.

19. Fifth Plan projections call for annual average increases during 1982-86 of 7.6 percent in output, 2.9 percent in employment, and 4-5 percent in productivity. See Republic of Korea, op. cit., pp. 16-17. In 1982, output rose 5.4 percent, employment 2.7 percent, and unemployment fell by 0.1 percent to 4.4 percent.

20. In addition, inactivity among non-farm males has increased much more than employment since 1978, a sign of slack non-agricultural demand for labor. The search for unemployment surrogates is necessary because labor-force estimates are based on concepts like "unemployment" that originated in the United States and are not wholly appropriate when applied to developing countries like Korea. One reason, beside the fact that the large numbers of self-employed and family workers are not subject to unemployment as are employees, is that the alternative to employment is typically inactivity or short work weeks rather than unemployment since farm women return to housekeeping duties during the slack seasons while those people formerly employed in non-agricultural activities can be absorbed into the family business.

21. See Moo-ki Bai, "The Turning Point in the Korean Economy", The Developing Economies, Vol. 20, No. 2 (June 1982), pp. 17-40.

22. Female participation rates of around 42 percent in recent years are relatively high (above US, somewhat below Japanese levels), but the figures are high because of Korea's relatively large numbers of farm women (who have above-average participation rates), and because labor-force calculations include people aged 65 and over. Participation among the elderly drops radically, particularly among elderly females, while the proportion of females in the group (1979-80) was only 7 percent, compared with 10 percent in Japan and 13 percent in the US. Also, the age-pattern of female participation is M-shaped,

so that rates decline sharply in the 25-34 age group before rising again among older women. This drop, associated with child raising, should decline if birth-rates continue to fall.

23. Estimates for the 1963-70 period are derived from the author's "Labor Absorption in Korea Since 1963", The Philippine Economic Journal, Vol. 15, Nos. 1 and 2 (1976), pp. 36-81. Figures for earlier years cannot be used since consistent estimates are available only since 1963. Also, the census data for 1970 and 1980 are not wholly comparable because the 1970 census was conducted on October 1, the 1980 census on November 1. Monthly surveys that began in July 1982 show a sharp drop in employment of 1.2 million from October to November that is centered in farm households, probably because October, when rice is harvested, wheat and barley are planted, is a seasonal peak for farm employment. Since the survey reference period is the week centering on the 15th of the month, the September-October average should approximate October 1, the October-November average November 1. The decline from the first average to the second was 478 thousand, which indicates that a 1980 census taken on October 1 would have shown employment to be 3.3 percent higher in 1980. This also suggests that farm employment dropped less than is shown here and, in consequence, the decline in labor intensity would also be smaller. More important quantitatively, however, is the impact of cyclical differences that have the opposite effect on labor intensity. Output growth was similar to that in adjacent years in 1970, but not in 1980 when there was an unusual 6.2 percent decline. This centered in agriculture (1980 output was 20 percent below the 1979 level) so that adjusting output figures to normal (adjacent) levels would lower labor intensity and accentuate the long-term decline from 1970 to 1980.

24. The estimate for the finance-insurance-real estate category, as before

with the labor-intensity measures, is unexpected because it shows that productivity declined from 1970 to 1980. Since real investment in the category more than doubled from the late 1960s to the late 1970s and many firms had acquired sophisticated office equipment by 1980 the explanation, as before, probably lies in product prices. In this instance, productivity may have dropped because the price of financial services should decrease or rise less than other prices as capital becomes more plentiful.

25. East African railway and mining enterprises offer cases in point. See C.R. Frank, Jr., "Urban Unemployment and Economic Growth in Africa", Oxford Economic Papers (New Series), Vol. 20, No. 2 (July 1968), pp. 250-74.

26. It is possible to calculate 1980 employment in the absence of productivity increase by dividing 1980 output by 1970 output per worker. This assumes, however, that output and its composition would be the same in 1980 with or without productivity increase, which is unlikely because incomes rise with productivity and, as incomes rise, Engel's Law requires that demand shifts in favor of more income-elastic goods and services.

27. Absorption in other services could also be low because output growth is upward biased or employment growth downward biased. I have no basis for assuming that employment figures are biased one way or the other, but the published output estimates are likely to be too low, not too high. The other services category includes government employees (less the military) and output is the sum of domestic product originating in public administration and defense as well as in community-social-personal services. The small increase in GDP originating in public administration and defense is almost the same as the increase in published estimates for government employment plus armed forces fixed at around 600 thousand. This is consistent with a national-accounting

convention that measures government output growth by the increase in public employment with no allowance for productivity increase. This convention is highly unrealistic and downward biases published estimates of government output.

28. Censuses of wholesale and retail trade (plus restaurants and hotels) show that the average retail establishment (retail establishments account for over half of total trade employment) employed only 1.13 persons in 1968 and 1.81 in 1979. Average sales per establishment, after adjustment by the All-Urban CPI, rose 4.6 times in real terms, however, which shows that productivity increased significantly even if scale did not.

29. Estimates of the contribution of export to employment suggest that the direct and indirect employment generated by export production in 1970 accounted for 25 percent of manufacturing employment and 9 percent of total employment. See David C. Cole and Larry E. Westphal, "The Contribution of Exports to Employment in Korea", in Wontack Hong and Anne O. Krueger, eds., Trade and Development in Korea (Seoul: Korea Development Institute, 1975), p. 94.

30. Large firms do not necessarily have large establishments (i.e. operating units), but small firms cannot have large establishments by definition.

31. See Sang-mok Suh, The Patterns of Poverty in Korea, Paper 7903 (Korea Development Institute: Seoul, April 1979).

32. See Sun-joo Oh, "The Living Conditions of Female Workers in Korea", Korea Observer, Vol. XIV, No. 2 (Summer 1983), pp. 185-200.

33. The Act prohibits women from working more than 150 hours overtime a year, yet Kuro and Kumi women textile workers averaged 10.5 hours a day and often worked on holidays. See Sun-joo Oh, ibid.

34. The quote is from American Embassy, Labor Trends in the Republic of Korea (mimeographed, August 1982), p. 7. Figures on union membership and organizable workers are from Moo-ki Bai, "Structural Transformation of Korean Labor Economy", The Korean Economic Journal, Vol. XXI, No. 4 (December 1982), p. 606, in Korean.

35. This last contradicts the concluding statement of an IMF consultative mission to Korea (dated March 14, 1983) that was recently released by the Korean government. The statement mentions the "gradual eradication of inflationary psychology", and states that "lower inflationary expectations should also moderate wage demands, rendering wage negotiations a less contentious issue this spring". Since the statement is in the subjunctive, it may be interpreted as an expression of wishful thinking rather than a prediction of what is to come.

36. The material in this section is taken in large part from two of the author's earlier works, "The Korean Economy in the 1980s: The Roles of Government, Restructuring, and Take-Off", scheduled for publication in Sino-Soviet Affairs, and "Economic Development in South Korea", a paper prepared for the Twelfth International Conference on the Unity of the Sciences, Chicago, November 1983.

37. For example, industrialization failed in 19th Century China, it is argued, because the Ch'ing government's share of GNP was so low (an estimated 1-2 percent) that it did not have the resources needed to support industrialization. See Dwight Perkins, "Government as an Obstacle to Modernization: The Case of Nineteenth Century China", Journal of Economic History, Vol. 27, No. 4 (December 1967), pp. 478-92.

38. Determinants of tax capacity are analyzed by Joergen R. Lotz and Elliott R. Morss in "A Theory of Tax-Level Determinants for Developing Countries", Economic Development and Cultural Change, Vol. 18, No. 3 (April 1970), pp. 328-41.

39. Leroy Jones and Il Sakong, Government, Business, and Entrepreneurship in Economic Development: The Case of Korea (Cambridge, Mass.: Harvard University Council on East Asian Studies, 1980), p. 150.

40. Ibid., pp. 151-155. Issues of Korean public-enterprise pricing and efficiency are discussed in Gilbert T. Brown, Korean Pricing Policies and Economic Development in the 1960s (Baltimore: Johns Hopkins University, 1973). The figures for public enterprise shares come from Il Sakong, Macro-Economic Aspects of the Korean Public Enterprise Sector, Working Paper 7906 (Seoul: Korea Development Institute, no date).

41. Though the analogy is imperfect, the Park and Chun regimes are similar in significant ways to contemporary military regimes in Brazil and Argentina. See F. Cardoso, "Characterization of Authoritarian Regimes", in David Collier, ed., The New Authoritarianism in Latin America (Princeton: Princeton University, 1979), pp. 33-57.
42. G. William Dick, "Authoritarian versus Nonauthoritarian Approaches to Economic Development, Journal of Political Economy, Vol. 82, No. 4 (July-August 1974), p. 819. The presumed economic benefits of authoritarian regimes, such as political stability, firm purpose of direction, and shielding of decision making from popular demands or pressures of economic interest groups, are probably offset by the greater individual participation, benefits of non-conformity, and increased effectiveness of criticism associated with democratic or more competitive regimes.
43. Low income inequality should follow from land reform in the late 1940s and the 1950s, asset destruction during the Korean War and asset confiscation by the military government in 1961, and widespread generalization of education. A World Bank-Institute of Development Studies report shows an unusually low degree of income inequality for Korea, while an annex to the report (by Irma Adelman) suggests that the overall degree of income inequality has remained unchanged. See Hollis Chenery, et. al., Redistribution with Growth (London and New York: Oxford University Press, 1974). The validity of the evidence used to establish Korea's distribution has been questioned, however. See Bai Moo-ki, "Examining Adelman's View on Relative Income Quality in Korea: With Focus on Her Studies Outlined in the World Bank Report", Social Science Journal (Korean Social Science Research Council-Korean National Commission for UNESCO), Vol. V, No. 1 (1978), pp. 85-99. The recent Fifth Five-Year Economic and



Social Development Plan indicates that inequality has in fact increased from 1965 to 1980. See Government of the Republic of Korea, The Fifth Five-Year Economic and Social Development Plan, Seoul, 1982 (English version), p. 9.

44. Gunnar Myrdal, Asian Drama: An Inquiry into the Poverty of Nations (New York: Twentieth Century Fund, 1968), Vol. 1, p. 66, and Vol. II, pp. 895-900.

45. Jones and Sakong, op. cit., p. 139. This leaves the question of why the Rhee regime, unlike the Park and Chun regimes, was ineffective in enforcing economic policies. One possible reason is that the Rhee regime was ineffective because it was not authoritarian. A more persuasive reason is that it was ineffective because President Rhee gave priority to political rather than to economic problems, and was therefore not committed to economic development as was President Park or as is President Chun.

46. See B.R. Nayar, "Political Mainsprings of Economic Planning in New Nations", Comparative Politics, Vol. 6, No. 3 (April 1974), pp. 341-66.

47. See the author's "Korea's Five-Year Plans", in Irma Adelman, ed., Practical Approaches to Development Planning: Korea's Second Five-Year Plan (Baltimore: The Johns Hopkins University, 1969), pp. 40, 44-45.

48. See Youngil Lim, Government Policy and Private Enterprise: Korean Experience in Industrialization, Korea Research Monograph No. 6 (Berkeley: Center for Korean Studies, Institute of East Asian Studies, University of California, 1981), pp. 11-18.

49. L.L. Wade and B.S. Kim, Economic Development of South Korea (New York: Praeger, 1978), p. 196.

50. For example, ". . . the government developed effective planning procedures . . ." and ". . . it was . . . in the implementation of policy that the Park regime particularly distinguished itself from governments in most less-developed countries". See Edward S. Mason, et. al., The Economic and Social Modernization of the Republic of Korea (Cambridge, Mass.: Harvard University Council on East Asian Studies, 1980), p. 293.

51. Comprehensive descriptions of the organized and unorganized money markets are given by David C. Cole and Yung Chul Park in Financial Development in Korea: 1945-1978 (Cambridge, Mass.: Harvard University Council on East Asian Studies, 1983), Chapters 3, 4.

52. The extent to which the government controls the credit supply is necessarily conjectural. Curb-market activity is illegal so little is known about the volume of curb-market lending. See the author's Economic Growth and Structure in the Republic of Korea (New Haven: Yale University, 1977), pp. 188-89.

53. See Benjamin I. Cohen and Gustav Ranis, "The Second Restructuring", in Gustave Ranis, ed., Government and Economic Development (New Haven: Yale University, 1971).

54. The four most successful developing economies or, simply, the "Four", was a term used by Little in discussing Taiwan's growth in a comparative context. See Ian M.D. Little, "An Economic Reconnaissance", in Walter Galenson, ed., Economic Growth and Structural Change in Taiwan (Ithaca: Cornell University, 1979), pp. 448-49.

55. The distinction is significant because the high import content of exports makes export ratios (i.e. gross value of exports ÷ gross national product) a misleading indicator of the importance of exports in economic activity.

56. See S. Kanasa-Thanan, "Stabilizing an Economy: The Korean Experience", in Irma Adelman, ed., Practical Approaches to Development Planning: Korea's Second Five-Year Plan (Baltimore: The Johns Hopkins University, 1969), pp. 257-76.

57. A more detailed description of export promotion measures is given in Charles R. Frank, Jr., Kwang-suk Kim, and Larry Westphal, Foreign Trade Regimes and Economic Development: South Korea (New York: National Bureau of Economic Research - Columbia University, 1975).

58. Estimates for effective import protection, export subsidy, and effective incentives (a weighted average of the first two) in 1978 are given in Chong Hyun Nam, "Trade, Industrial Policies, and the Structure of Protection in Korea", in Wontack Hong and Lawrence B. Krause, ed., Trade and Growth of the Advanced Developing Countries in the Pacific Basin (Seoul: Korea Development Institute, 1981), pp. 187-211. Downward bias in the estimates is suggested in comments by W. Max Corden and Anne O. Krueger, ibid., pp. 212-16.

59. United Nations, Monthly Bulletin of Statistics, April 1983, p. xxvi.

60. Abundance of labor in the late 1950s and 1960s, mainly "surplus labor" of the sort described in Arthur Lewis's celebrated model of economic development

with unlimited supplies of labor, has been established by Yong-sam Cho and others. See the author's Economic Growth and Structure in the Republic of Korea, pp. 111-112. There is little evidence that factor prices in Korea have been more or less distorted than factor prices in other countries. International comparisons of factor intensities " . . . tend to support the general validity of the strong-factor-intensity hypothesis". See Hal B. Lary, Imports of Manufactures from Less Developed Countries (New York: National Bureau of Economic Research - Columbia University, 1968), p. 80.

61. See Jones and Sakong, op. cit., Chapter 6, especially pp. 170-73.

62. Percentage shares of world plywood, textile, and apparel exports in 1970 and 1977 were as follows:

	<u>1970</u>	<u>1977</u>
<u>Plywood veneers</u> (SITC 63121)		
ROK	18.4	28.2
Japan	14.9	7.0
<u>Textiles</u> (SITC 65)		
ROK	0.7	3.2
Japan	14.1	11.0
<u>Apparel</u> (SITC 84)		
ROK	3.4	8.8
Japan	7.4	2.0

63. The value of investment in human capital in 1960 was estimated to be larger than investment in physical capital and to have grown faster during the 1960s. A reference to these estimates, by C.Y. Jung, can be found in Youngil Lim, "Korea's Trade with Japan and the United States: Issues and Implications", in The Korean Economy: Issues of Development, Korea Research Monograph Number 1 (Berkeley: Institute of East Asian Studies, Center for Korean Studies, University of California, 1980), pp. 44-45.

64. Labor intensity is usually measured according to value added per worker. Where value added is high, it is assumed that inputs other than raw or unskilled labor, such as physical capital or human capital (represented by wages above the unskilled wage level) are high. Exports in each intensity category are compared with total non-natural resource based (NNRB) exports because comparative advantage in natural resource-based industries rests on resource possession rather than on factor endowments. The formulation here derives from Seev Hirsch, "Capital or Technology? Confronting the New-Factor Proportions and Neo-Technology Accounts of International Trade", Weltwirtschaftliches Archiv, Band 110, Heft 4 (1974), pp. 543-44.

65. Kaname Akamatsu, "A Historical Pattern of Economic Growth in Developing Countries", The Developing Economies, Preliminary Issue No. 1 (March-August 1962), pp. 3-25.

66. See P.S. Heller and R.C. Porter, "Exports and Growth: An Empirical Re-investigation", Journal of Development Economics, Vol. 5, No. 2 (June 1978), pp. 191-93.

67. Tuvia Blumenthal, "Exports and Economic Growth: The Case of Postwar Japan", Quarterly Journal of Economics, Vol. 86, No. 4 (November 1972), pp. 617-31.

68. Donald B. Keesing, "Outward-Looking Policies and Economic Development," Economic Journal, Vol. 77, No. 306 (June 1967), pp. 303-20.

69. Foreign saving (borrowing) is usually derived by subtracting a country's current-account deficit from gross domestic capital formation. This deficit, a residual itself, though usually large and negative in Korea, has occasionally been small or small and positive.

70. See Gary P. Sampson, "Contemporary Protectionism and Exports of Developing Countries", World Development, Vol. 8, No. 2 ( February 1980), pp. 113-27.

71. See Larry E. Westphal, Yung W. Rhee, and Gary Pursell, Korean Industrial Competence: Where it Came From, World Bank Staff Working Paper No. 469 (July 1981).

72. Results of the econometric study are reported in Korea's Economy (Korea Economic Institute), Vol. 2, No. 2 (March 1983). "[I]mportant new policy goals will be to . . . eliminate the chronic annual deficits in the nation's international balance of payments . . . a few years earlier than originally anticipated". Economic Planning Board, Economic Bulletin, August 4, 1983, p. 4.

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